A MODEL FOR EFFECTIVE LEADERSHIP IN COMMUNITY COLLEGES COMMITTED TO CONTINUOUS QUALITY IMPROVEMENT

By

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Abstract of Dissertation Presented to the Graduate School
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A MODEL FOR EFFECTIVE LEADERSHIP IN COMMUNITY COLLEGES COMMITTED TO CONTINUOUS QUALITY IMPROVEMENT

By

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To remain competitive in the future, community colleges must embrace change and respond to worldwide influences. Continuous Quality Improvement (CQI) is an organizational and philosophical approach to addressing change through continuous improvement, yet the successful implementation of CQI has been difficult for many colleges. Proponents of CQI have emphasized the central importance of leadership, but very little research has been conducted to explore what leadership attributes and styles best complement a continuous quality organization. To address the complexities of leadership and the leadership situation in a CQI college, this study considered multiple criteria including the leadership situation and intervening variables affecting the leadership situation as well as the personality attributes, leadership styles, and team styles of the presidents and other senior leaders.

The purpose of this study was to develop a theoretical construct of effective leadership in a community college that has adopted or wants to adopt the principles of

continuous quality improvement. Two institutions were identified as successful based on an assessment of their degree of implementation of the Malcolm Baldrige Education Criteria for Performance Excellence. The Occupational Personality Questionnaire (OPQ) was used to determine the critical personality attributes, team types, and leadership styles of the presidents and their senior team members. Questionnaires, institutional reports and semi-structured interviews were used to understand the practices of the CEO's and to explore the organizational structure.

The results of the study suggest a number of leadership traits and behaviors important to successful implementation of CQI. Although CQI can be successful in diverse environments, implementation requires a long-term commitment, as much as 10 to 15 years. The president should be committed to empowering others and should embrace the concept of leadership in which leaders and followers exert mutual influence. Cross-functional teams and horizontal work structures should be developed. A CQI environment requires a relations-oriented leadership. The colleges studied exhibited a high level of shared leadership; therefore, the leadership attributes of both presidents and other college leaders were examined.

CHAPTER 1
INTRODUCTION

Community colleges, which enroll nearly 6 million students nationwide (U.S. DOE, 2001), prospered in decades of dramatic growth. Now, they are a major sector of higher education, and their leaders face new challenges as society and government turn to community colleges for solutions to today's problems (Pierce & Pedersen, 1997).

Increasingly, community college leaders are expected to adapt their institutions to the needs of a new society. They face increasing demands to tailor courses to the needs of the workplace, to provide new delivery methods, and to address diverse learning styles (Nunley, 2001). In the current context of continuous change and of the shift from an industrial-based to an information-based economy, community colleges must be structured to respond to a changed and changing environment (Rowley, 2001; Vaughan, 2000); they must be organized to address the factors of demand, competition, and quality (Alfred & Carter, 2000); and they must be positioned to address the effects of globalization (Levin, 2001). Community college faculty and administrators identified funding workforce development, using outcome measures for accountability, and meeting the cost of technology as critical issues facing their institutions (Campbell & Evans, 2001). To meet these challenges successfully, community college leaders must adopt new organizational structures and develop a new understanding of leadership and the roles of leaders (Cain, 1999; Pierce & Pedersen, 1997; Tierney, 1999).

Townsend (2000) identified four values that determine educational policy: choice, quality, efficiency, and equity. She stated that these values sometimes conflict with one

another. In the environment of demand for new services, limited resources, and possible conflicts in values, community college leaders must seek ways to define institutional roles and to focus on the community college's core mission of teaching and learning.

Over the last 10 years, a number of college and university leaders have turned to the principles of total quality management (TQM) or continuous quality improvement (CQI)[1] as a philosophical and structural base for addressing the challenges of changing roles and organizational structures (Axland, 1992; Bonstingl, 2001; Holmes, 1997). Benefits of CQI for educational institutions include applying quality principles to teaching and learning, benchmarking, empowering individuals, emphasizing improvement, and implementing change (Barth et al., 2000; Marchese, 1993). However, CQI requires long-term commitment and is difficult to implement primarily because its use requires a change in philosophical approach for all areas of an organization (Peterson, 1993).

Deming (1986), Juran (1989), and Crosby (1979), three major quality management theorists, stressed the responsibility of top leadership in quality organizations. Community college researchers (Fisher, J. L., 1993; Freed, 1998; Gratton, 1993; Seymour, 1992) have also described effective leadership as fundamental to successful implementation of CQI. Despite the key role of leadership in organizations, no clear understanding exists of what distinguishes effective leadership (Bennis & Nanus, 1997; Birnbaum, 1988; Elsner, 1984; Fisher, J. L. & Koch, 1996; Gratton, 1993). It is still uncertain what styles and characteristics are needed to promote successful implementation of CQI (Haire, 1997).

The purpose of this study was to develop a theoretical construct of effective leadership for a community college that has adopted or wants to adopt the principles of continuous quality improvement. The study presents a case analysis of leaders in colleges that have demonstrated high levels of success in implementing CQI. The study examined the personality and leadership traits and behaviors of key leaders as well as the situational and intervening variables present in these colleges. Specifically, this study determined the level of implementation of the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence in member institutions of the Continuous Quality Improvement Network (CQIN). Using both quantitative and qualitative data, the study then presented the personality attributes, leadership styles, and team profiles of the presidents and senior team members in institutions that scored highest on the criteria. The situational and intervening factors associated with successful implementation of CQI were determined and explored. Based on the analysis of this data, a theoretical construct for community college leadership in CQI colleges was developed.

Background and Rationale

Challenges to community colleges include increased demands for serving a diverse student population, for minimizing the need for developmental education, for providing new information and learning technologies, and for addressing unemployment and workforce retraining needs (Alfred & Carter, 2000; Cohen & Brawer, 1994; Nunley, 2001; Wharton, 1997). In addition to these demands to expand educational roles, community colleges leaders must also address the realities of changing student

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[1]The terms TQM and CQI and CQA (Continuous Quality Assurance) are used interchangeably in this study, reflecting the trend in educational literature to emphasize quality improvement and quality assurance rather than management (Freed & Klugman, 1997).

expectations, reduced resources, increased accreditation requirements, and legislative mandates for outcome-based accountabilities (Alfred & Carter, 2000; Nunley, 2001; Rowley, 2001; Tuttle, 1994; Wharton, 1997).

Three of the problems that community college leaders must confront as they prepare their institutions to meet these challenges are recognizing and addressing the changes that must occur (Alfred & Carter, 2000; Leslie & Fretwell, 1996; Lorenzo & Zajac, 1996), accommodating the shift from an industrial-based to an information-based economy (Rowley, 2001), and addressing the effects of a global economy (Levin, 2001). Carter and Alfred (1996) described the significant changes that colleges must undergo. Colleges must shift their cultures from an ivory tower mentality to being service oriented; leaders must abandon static structures in favor of dynamic relationships, and faculty must replace discipline-focused, compartmentalized education with holistic, integrated learning. Napier, Sidle, Sanaghan, and Reed (1998) said colleges are being pushed into consumer-driven markets by the new information age. They believe the new technologies will transform teaching, research, and delivery systems. Carter and Alfred (1996) claimed that "today's challenges are significantly more turbulent and threatening than those faced in the past" (p. 4). Raisman (1994) stated that planning for the future means planning with state, national, and international environments in mind; community colleges that focus only on the local community will end up reacting to trends that are reshaping their communities rather than helping to plan the future of those communities. In addition, the public expects higher education to provide its graduates with the skills and knowledge necessary to compete in a rapidly changing and complex global job market (Fisher, M. C., 1990; Hull & Souders, 1996; Jones, 1996). Graff (1995) described new workers as

"knowledge workers who must shift from reliance on manual skills to use of theoretical and analytical knowledge that can be acquired only through formal schooling" (p. 5). Lorenzo and LeCroy (1994) claimed that institutions that intend to remain competitive in the information age must undergo fundamental reinvention. Napier et al. (1998) described the transformation needed as a metamorphosis. Godbey (1993) stressed the need for institutions to be agile, to be able to adapt new technologies, and to form new partnerships in order to maintain and enhance the institution.

Levin (2001) studied seven institutions that have made progress in responding to the various marketplace communities and stakeholders and found that often "a balanced recognition of human achievement" (p. xx) was neglected. In order to survive, community colleges must provide the best opportunities for student success and must establish friendly relationships with other entities in the education market including other educational systems; local, state, and federal governments and their agencies; local communities and community organizations; and private funding organizations (Roueche & Roueche, 2000).

Continuous Quality Improvement

Despite differences in purpose and structure between business and education, successful business models have attracted the attention of higher education leaders. Numbers of colleges are adapting the quality management approaches that successfully transformed many American businesses (Horine & Hailey, 1995). The work of Deming (1986), Juran (1989), and Crosby (1979) provided a theoretical and practical basis for quality management in American business and industry. More recently these principles have been adopted and adapted by educational institutions. Change and the use of data are primary tenets of a quality organizational structure, and quality organizations stress

outputs and assessment. Burgdorf (1992) described continuous quality improvement as "a customer-oriented philosophy of management that utilizes total employee involvement in the relentless, daily search for improvement of quality of products and services through the use of statistical methods, employee teams, and performance management" (p. 1).

Total quality is a systems approach to management that encompasses all levels of an organization in a focused, ongoing effort to provide products or services that meet or exceed customer demands. Leaders use quality tools to control costs, improve staff productivity and service, and meet customers' expectations (Burgdorf, 1992). Because CQI requires continuous assessment and improvement, it occurs in a climate of change and requires changes in institutional culture (Freed, 1998). Because it is output driven, it addresses demands for outcome-based accountabilities (Coleman, 1995).

The national standard for measuring the success of TQM in industry is the Malcolm Baldrige National Quality Award (MBNQA) (Juran, 1995). The United States Congress passed legislation in 1987 that authorized the U.S. Department of Commerce to develop the award. Public law 100-107 states, in part, that foreign competition has challenged United States leadership in productivity and that poor quality has been a primary cause. The law states that the award would help improve quality and productivity in the United States by recognizing those companies that meet the rigorous standards of the award (BNQP, 2001). Knotts, Parrish, and Evans (1993) concluded that business, service, and industry leaders agree that the Baldrige Award provides the best framework for a total quality management system.

Recently, Baldrige criteria were developed for education. The Malcolm Baldrige National Quality Award Education Criteria for Performance Excellence were piloted in

1995 and revised in 1998. Educational institutions first became eligible to apply in 1999 (NIST, 1998). Like the criteria for business and industry, the criteria for education can be used to guide and assess quality initiatives (Holmes, 1997; Moore, 1996; Paris, 1996; Thompson, 1995). The criteria provide a means for an educational institution to be measured on its successful implementation of quality principles. The educational award criteria have been shown to be appropriate to the philosophy and goals of educational institutions (Holmes, 1997; Moore, 1996; Thompson, 1995; Watwood, 1996; Winn & Cameron, 1998).

Effective leadership is the key to successful implementation of TQM (Freed, Fife, & Klugman, 1994; Leffel et al, 1991; Norton, 1994; Seymour 1992; Walton, 1986). Quality theorists Deming (1986), Juran (1989), and Crosby (1979) emphasized the importance of leadership in a quality organization. Unsuccessful implementation has occurred primarily when top administrators are not involved in the processes (Satterlee, 1997). The CEO must play the role of the chief quality officer; must be directly involved in the organization, both internally and externally; and must also delegate operations and develop teams with leadership responsibilities (Peterson, 1993).

Leadership Studies

The proponents of CQI have stressed the importance of leadership, but the leadership characteristics and abilities required for successful CQI implementation are undefined (Culp 1992; Fisher, J. L. & Koch, 1996; Haire, 1997). Elsner (1984) stated that by failing to define and characterize the kind of leadership needed for the 21st century, the community college movement has failed to invest in its future. Birnbaum (1988) claimed that there is no agreement on how to define or assess leadership. In her research on leadership for the learning organization, Gratton (1993) identified a leadership crisis

and claimed that current concepts of leadership, "dominated by power and profit motifs," (p. 94) are outmoded. In 1997, Bennis and Nanus repeated their conclusions from 1985:

> Decades of academic analysis have given us more than 850 definitions of leadership. Literally thousands of empirical investigations of leaders have been conducted in the last seventy-five years alone, but no clear and unequivocal understanding exists as to what distinguishes leaders from nonleaders, and perhaps more important, what distinguishes effective leaders from ineffective leaders and effective organizations from ineffective organizations. (p. 4)

Leadership studies have focused on particular traits, behaviors, or situations, or they have examined leaders or groups of leaders who have been perceived to be effective by other leaders or experts.

> The confused state of the field [leadership research] can be attributed in large part to the sheer volume of publications, the disparity of approaches, the proliferation of confusing terms, the narrow focus of most research, the preference for simplistic explanations, the high percentage of studies on trivial questions, and the scarcity of studies using strong research methods. (Yukl, 2001, pp. 423-24)

More recently, some leadership research has begun to address a combination of factors that include the situation, the leader, the followers, and the culture and organizational structure of an organization. Bass (1990) emphasized that factors affecting leadership include leadership traits, situational effects, and the interaction of traits and situation. "The similarities of results [in trait studies] make it reasonable to conclude that personality traits differentiate leaders from followers, successful from unsuccessful leaders, and high-level from low-level leaders" (p. 87). Yukl (2001) suggested that the various lines of research need to converge and that the various approaches should be viewed as part of a larger network of interacting variables. Yukl argued that leadership characteristics and behaviors are both the independent and dependent variables and that leaders affect and are affected by other variables. Yukl also recognized that situational

and intervening variables could mediate the effects of leader behavior and that an institution's success criteria are another important factor.

The success of an institution involved in continuous quality improvement can be determined using the Malcolm Baldrige National Quality Award Education Criteria (Holmes, 1997; Moore, 1996; Paris, 1996; Thompson, 1995; Winn & Cameron, 1998). The traits and leadership styles of the leaders as well as the situational and intervening variables affecting leadership effectiveness in successful CQI institutions need to be studied.

Statement of the Problem

To remain competitive in the future, community colleges must undergo fundamental reinvention (Lorenzo & LeCroy, 1994). The current trends and demands in society require agile institutions (Godbey, 1993) whose leaders can identify and respond to globally connected communities (Levin, 2001; Schein, 1992). As society turns to the community college for solutions to problems, the expectations for presidential leadership have become complex, demanding, and sometimes contradictory (Pierce & Pedersen, 1997). Community colleges must be led by "exceptional leaders who can deal with change and revitalize the institutions of America" (Roueche, Baker, & Rose, 1989, p. 10).

Continuous Quality Improvement is an organizational and philosophical approach to addressing change through continuous improvement, yet the successful implementation of CQI has been difficult for many institutions. Proponents of CQI have emphasized the central importance of leadership in a CQI organization (Freed, et al 1994; Leffel et al 1991; Norton, 1994; Seymour 1992; Walton, 1986). However, "very little empirical evidence exists to help understand how leadership styles best complement and

assure success of CQI implementation" (Haire, 1997, p. 2). Jameson and Soule (1991) noted that over the past years it has become apparent that the knowledge of leadership styles was not sufficient to meet the demands of today's management innovations, such as TQM and other strategies. Bass (1990) and Yukl (2001) have argued that leadership studies must broaden, rather than narrow, the factors considered.

Purpose of the Study

The purpose of this study was to develop a theoretical construct of effective leadership in a community college that has adopted or wants to adopt the principles of continuous quality improvement. The study presents a case analysis of leaders in colleges that have demonstrated success as measured by the Baldrige Education Award criteria. This study explored leadership characteristics and behaviors as well as situational and intervening factors in institutions that have committed to the principles of CQI. The major research questions that were addressed in the study are as follows:

- Is there a difference in the situational variables in colleges with similar levels of implementation of CQI?
- Is there a difference in the personality traits of leaders in colleges with similar levels of implementation of CQI?
- Is there a difference in the leadership styles used by leaders in colleges with similar levels of implementation of CQI?
- Is there a difference in the team types used by leaders in colleges with similar levels of implementation of CQI?
- Is there a difference in the intervening variables affecting CQI implementation in colleges with similar levels of implementation of CQI?

This study determined the leadership traits and styles found in presidents and senior team members of institutions that have demonstrated effective implementation of

CQI strategies. Situational and intervening factors were also identified and explored. Specifically, this study determined the level of implementation of the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence in member institutions of the Continuous Quality Improvement Network. The colleges with the highest performance were selected for further study. Both quantitative and qualitative inquiry methods were used to answer the research questions. The Occupational Personality Questionnaire was used to determine the critical traits, team types, and leadership styles of the leaders and their senior team members. Questionnaires, institutional reports, and other documents were used to gather information about the situational and intervening factors that are associated with successful implementation of CQI. Semi-structured interviews were used to further explore the contextual conditions. Based on the analysis of this data, a theoretical construct for community college leadership in CQI organizations was developed.

This study explored the nature of leadership exhibited by presidents in community colleges that have demonstrated successful implementation of continuous quality improvement principles. The research instruments included the Baldrige Quality Index Rating Self-Assessment Survey; the Occupational Personality Questionnaire (OPQ) developed by Saville and Holdsworth, Limited (SHL) in 1984; background questionnaires profiling the institution, the president, and senior team members; analysis of college documents; and individual interviews. A detailed description of the methodology is presented in Chapter 3.

Significance of the Study

Current knowledge of leadership styles is not sufficient to meet the demands of today's management innovations such as TQM (Jameson & Soule, 1991). Many researchers (Bass, 1990; Bennis & Nanus, 1997; Birnbaum, 1988; Elsner, 1984; Fisher, J. L. & Koch, 1996; Gratton, 1993; Yukl, 2001) have stated the need for a more complete or comprehensive study of leadership.

Studies of CQI in community colleges have often focused on levels of implementation (De Los Santos, 1996; Fallo, 1997; Paris, 1996) or on the appropriateness of CQI to educational institutions (Carpino, 1995; Zagorski, 1994). Only a few studies have focused on leadership in CQI colleges (Brigham & Carusone, 1996). Neither Lappas (1996) nor Haire (1997) found any correlation between transformational leadership styles and continuous quality improvement efforts. Kyle's (1995) results did not show a strong relationship between the visionary leader and a total quality culture. Lockwood (1995) found a significant relationship between the frequency of lateral decision-making of academic deans and a stated commitment to total quality in a community college. Lockwood indicated that further research on decision-making in total quality institutions is needed. There has been no study that has focused on leadership in institutions with a high level of quality implementation or that has examined a broad range of factors affecting leadership.

The results of this research will enrich the existing body of knowledge about leadership and quality theory and will provide a baseline of information for further research. This study adds to the theoretical knowledge of leadership, organizational change, and team functions, and it offers a new approach for studying successful leaders

by selecting those to be studied based on institutional success. The results should also be of interest to practitioners who wish to implement CQI in their institutions.

Definition of Terms

Total Quality Management is a management philosophy that focuses on developing, maintaining, and adapting processes that promote continuous improvement of all aspects of the organization in order to meet a clearly defined vision based on customer satisfaction.

Continuous Quality Improvement is sometimes regarded as the processes involved in improving quality, but it is most often used interchangeably with total quality management. Continuous Quality Improvement is the term for TQM more commonly used in institutions of higher education.

Leadership has been defined in terms of individual traits and behaviors, influence over others, interactions with others, and responses to the situation or environment. This study sought to explore these various concepts of leadership within a CQI organization.

Personality is that which is concerned with a person's typical or preferred ways of behaving, thinking, and feeling (Saville & Holdsworth, 1996, p. 1-4).

Leadership Attributes are those personality traits relevant to effective leadership (Saville & Holdsworth, 1996, p. 10-5).

Leadership/Associate Styles are the result of a combination of attributes. They indicate the behavior of an individual in vertical relationships with supervisors and with subordinates (Saville & Holdsworth, 1996, p. 10-7).

Team Types identify the roles that individuals are most likely to assume when they are part of a group or team (Saville & Holdsworth, 1996, p. 10-5).

Leadership Situational Variables consist of the contextual and organizational conditions that exist within a leadership setting.

Leadership Intervening Variables concern internal or external interventions that the leader can influence.

Limitations

The target population was limited to the member community colleges of the Continuous Quality Improvement Network. The case studies were further limited to the presidents and senior leaders in the two colleges that scored highest on the Self-Assessment survey. The Self-Assessment instrument, the Occupational Personality Questionnaire, and the interviews were all self-reporting instruments. Although no conclusions were drawn from any information obtained from only one source in the case study, the self-report instruments were subject to individual response errors. The conclusions are based on qualitative analysis and cannot be generalized to other populations.

Summary

Community colleges face new challenges as society, government, and industry look for solutions to today's problems within a context of continuous change and of a shift from an industrial-based to an information-based economy (Rowley, 2001). In recent years, several colleges have adopted the principles and practices of total quality management as the framework for organizational change. Total Quality Management provides the flexibility and tools that colleges need to adapt and remain flexible, and thus viable (Godbey, 1993). The successful implementation of CQI principles can be measured using the Malcolm Baldrige National Quality Award Education Criteria for

Performance Excellence (Holmes, 1997; Moore, 1996; Thompson, 1995; Watwood, 1996; Winn & Cameron, 1998).

Proponents of CQI have stressed the importance of leadership in successful implementation, but the leadership characteristics and abilities required for successful CQI implementation are undefined (Culp 1992; Fisher, J. L. & Koch, 1996; Haire, 1997). For this study data were collected to develop a theoretical construct that identifies the leadership traits, team types, and leadership styles that are present in presidents and other senior leaders in colleges that have successfully implemented CQI in particular settings. This construct adds to the theoretical knowledge of leadership, organizational change, and team functions. It should also be of interest to practitioners who wish to implement CQI in their institutions or who are interested in the influence of situational variables on leadership.

CHAPTER 2
REVIEW OF LITERATURE

This chapter includes a review of the literature on applying TQM/CQI principles in an academic setting as well as a review of the literature on leadership theory. The first section examines the theoretical and historical basis for the quality movement in the United States, the common principles of the quality process, and the development and use of the Malcolm Baldrige National Quality Award (MBNQA). The first section also examines the appropriateness of CQI to education, studies of implementation of CQI in education, and studies of barriers to implementation. Both the theoretical support and successful practice of CQI in education and the concerns and cautions were examined. The development and use of the MBNQA in education was also described. A review of the literature on the use and appropriateness of the award criteria was included.

The second section examines leadership theory and studies of the application of leadership theory to higher education and to implementation of continuous quality improvement in higher education institutions. This section also reviews studies of community college leadership including the theoretical basis for leadership characteristics and abilities needed for future community college leaders. This section also examines theories and principles of change in an organization and the theory and practice of team leadership, particularly in continuous quality improvement organizations.

Continuous Quality Improvement

Theoretical Basis for Quality Management

The principles underlying the structural and philosophical approaches to quality management in the United States are rooted in the works of three major theorists, W. Edwards Deming, Dr. J. M. Juran, and Philip B. Crosby. Deming first worked with Japanese businesses in the 1950s and became recognized in Japan as the primary contributor to the improvement of the Japanese economy. Deming's book, Out of the Crisis, (1986) written to transform American management, was based on 14 points that "apply anywhere, to small organizations as well as to large ones, to the service industry as well as to manufacturing" (p. 23).

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

6. Institute training on the job.

7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

8. Drive out fear, so that everyone may work effectively for the company.

9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.

10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

11. Eliminate work standards (quota) on the factory floor. Substitute leadership. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.

12. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, *inter alia*, abolishment of the annual or merit rating and of management by objective.

13. Institute a vigorous program of education and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job. (pp. 23-24)

Deming (1986) stressed controlling work processes using statistical thinking; he developed a system to distinguish acceptable variation from problematic variation, and he connected success to doing things right the first time, eliminating rework. Deming argued that success is not based on best efforts alone. He believed that people also need to know what to do, and leaders have to assume the responsibility for the drastic changes required. Deming's method requires constant assessment and improvement as well as a breaking down of barriers between workers and managers.

Juran also spent time working with the Japanese, providing training courses in managing for quality. His book, Juran on Leadership for Quality, (1989) was written to

provide leaders with strategies to attain quality through the use of three processes: quality planning, quality control, and quality improvement (p. 20). Juran also recognized that managing for quality requires fundamental change, "virtually a change of culture" (p. 321). Juran warned against mandating change; instead, he advised managers to develop practices to motivate participation in a positive way. Practices he advocated included participation, recognition, and communication (p. 433-437).

Crosby (1979) stressed organizing and motivating for quality. "Quality management is a systematic way of guaranteeing that organized activities happen the way they are planned. It is a management discipline concerned with preventing problems from occurring by creating the attitudes and controls that make prevention possible" (p. 22). In Quality Without Tears (1984), Crosby explained the four absolutes of quality: conformance to requirements; prevention; zero defects; and the price of nonconformance. According to Crosby (1988), successful companies have five characteristics: "people do things right routinely; growth is profitable and steady; customer needs are anticipated; change is planned and managed; and people are proud to work there" (p. 16). Managers must see quality as an asset and must implement the four absolutes.

These three theorists differ somewhat in their interpretations of total quality management, but all three cite the need for major change and the absolute commitment of top leadership.

History of Quality in the United States

Juran (1995) described the development of managing for quality in the United States. American colonists followed the European practice of master craftsmen training apprentices. Quality was determined through inspection of the product by the master, who supervised the creation of products for local customers. Managing for quality

through product inspection continued as the industrial revolution began in the nineteenth century. In the late nineteenth century, American businesses adopted the scientific management system of Frederick W. Taylor. To increase productivity without increasing the number of skilled craftsman, Taylor separated product planning from product development. However, the distancing of the craftsman from the final product and the evolution to processes using semiskilled and unskilled workers negatively affected quality. Departmental inspectors replaced master craftsmen, and products were made for unknown customers. Employee morale and quality declined. Inspection departments had to be developed to assure that faulty products were not sent to market.

Managing for quality began to shift from inspection to statistical quality control (SQC) in the mid-1920s, but the major impact of SQC did not occur until World War II (Juran, 1995) when quality began to be viewed "as a distinct management responsibility and as an independent function" (Garvin, 1988, p. 5). During this era, mathematical and statistical tools, such as analysis of variability, statistical sampling techniques, and Statistical Process Control (SPC), were developed (Garvin, 1988). Specialists and engineers were hired to manage quality control departments, and these departments were given a high status in company hierarchies. However, acute shortages of goods after World War II shifted emphasis to meeting delivery schedules, and quality suffered (Juran, 1995).

During the second half of the twentieth century, forces emerged that challenged the quality of U.S. products and shifted emphasis to quality assurance (Juran, 1995). The growth of consumer grievances and consumerism led to increases in test laboratories, product certification, government certification, consumer protection agencies, and better

business bureaus. The growth of consumerism along with growth in litigation and government regulation increased the demand for quality assurance. Quality assurance, which focused on remedying quality problems after purchase, became a management priority.

The Japanese quality revolution eventually forced American companies to develop efforts to become competitive in quality during production rather than after production. Garvin (1988) describes this stage as the era of strategic quality management. This stage required a dramatic shift to a new vision. "For the first time, top managers . . . linked it [quality] with profitability, defined it from the customer's point of view, and required its inclusion in the strategic planning process" (p. 21).

Common Quality Principles

Although researchers and theorists have recommended a variety of models to implement quality management, a number of common principles are fundamental to the success of a quality program (Fallo, 1997; Juran, 1995; Seymour, 1992).

- Customer focus. Customers must be satisfied with the quality. The concept of customer includes both internal and external stakeholders.
- Key role of upper managers. Success is not possible without the personal commitment and involvement of upper managers.
- Strategic quality planning. The organization's plan must include quality-related goals.
- Continuous quality improvement. Planning must be converted to projects that result in quality improvement. New organizational structures employing collaborative, multifunctional teams of managers, specialists, and representatives from all levels must be involved in continuous improvement projects.
- Processes. Key processes must be examined and redefined to meet quality improvement plans and to produce given results.

- Training. Training encompasses many areas ranging from training in the use of statistical methodologies to training in managing quality. Training involves all employees in all departments and job functions.

- Measurement. Measurement of success and outcomes must involve both the technological/production level and business processes.

- Benchmarking. Benchmarking, making comparisons to comparable processes in other businesses or settings, promotes factual analysis rather than empirical judgment.

- Empowerment. Planning that includes management and the workforce empowers all workers making workers more self-directed and tapping vital experience.

- Motivation. Recognizing superior performance improves motivation. Constant change requires recognition and reward systems that acknowledge and encourage quality performance.

- Persistence. Constancy of purpose and long-term commitment are required for success.

Malcolm Baldrige National Quality Award

The national standard for measuring the success of TQM in industry is the Malcolm Baldrige National Quality Award (MBNQA) (Juran, 1995). The United States Congress passed legislation in 1987 that authorized the U.S. Department of Commerce to develop the award. The criteria for the award cover seven categories: leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management, and results (Education, 2001). Knotts et al. (1993) concluded that service and industry agree that the Baldrige Award provides the best framework for a total quality management system.

The Malcolm Baldrige National Quality Award was established as a stimulus to improving quality. According to Juran (1995) the award greatly increased national awareness of the subject of improving quality. Although the number of applicants for the yearly award is usually under 100, many companies use the Award criteria as a tool to

self-evaluate their strengths and weaknesses. In addition, the Baldrige has stimulated the growth of state awards. As of 1994, over two-thirds of the states had created such awards (Juran, 1995). Knotts et al. (1993) reported on survey responses from 285 service and industrial firms. They concluded that the firms consistently agreed that the award process and its criteria are appropriate and that the Baldrige Award is accomplishing its goals. The Baldrige Award "fosters quality awareness, promotes the understanding of the requirements for quality excellence, promotes sharing of information on successful quality strategies, and recognizes U.S. companies that excel in quality achievement and quality management" (p. 52).

Appropriateness of Continuous Quality Improvement to Education

American businesses turned to quality management in response to global competition and a loss of American markets. Educational institutions, which are also experiencing rapidly increasing costs, competition from the private sector, declines in enrollments, and demands from the public and government for more accountability, have also turned to quality management for solutions (Holt, 1993; Mangan, 1992; Rhodes, 1992). Juran (1995) noted that industrial companies feel that "while quality has risen greatly in importance, the educational system has not kept up with this trend" (p. 591).

The relevance of quality management to higher education has been affirmed (Holt, 1993; Rhodes, 1992; Shaw, 1993) for meeting current challenges (Holmes, 1997), for meeting high standards (Barth et al., 2000) and for enriching faculty and student experiences (Bonstingl, 2001). Continuous Quality Improvement encourages educational institutions to refine or redefine missions that have become too broad and that attempt to be all things to all people (Brigham, 1994b; Seymour, 1993b). Its emphasis on the customer is an opportunity to demystify the concept of quality in education (Marchese,

1993) and to address the complaints and expectations of students, parents, employers, and legislators (Brigham, 1994b). Continuous Quality Improvement's emphasis on continuous improvement provides an opportunity for organizations to modify overly compartmentalized administrative structures and disconnected academic activities (Brigham, 1994b; Seymour, 1993b).

Seymour (1993b) pointed out that TQM can help colleges and universities improve performance. He also claimed that faculty reward systems and curriculum can be positively influenced. For Seymour, the greatest benefit of adopting CQI is the possibility of shifting from a resource model to a performance model as a foundation for educational excellence.

Marchese (1993) outlined a number of benefits of TQM to educational institutions. He said that focusing on customers, both internal and external to the institution, is the first benefit. The focus on customers demystifies quality because quality becomes a function of the institution's contributions to student learning; thus, quality is knowable and measurable. A second benefit is continuous improvement. According to Marchese academics know about quality assurance, but the idea that teaching and learning need to be continuously improved is new. A third benefit is management by fact, which is also new to academia. Benchmarking, the systematic search for best practices, is a fourth benefit. Fifth is TQM's philosophical tenet to give power to each person's work; policies should be aimed at empowerment of individuals and work teams. A sixth benefit is an organizational structure that includes training, teamwork, and mutual accountability. American colleges and universities are highly compartmentalized and vertically structured, making change and innovation difficult.

Godbey (1993), Executive Director for the Lehigh Valley Association of Independent Colleges in Bethlehem, Pennsylvania, looked beyond the implementation of TQM in individual institutions. Godbey argued that in the realm of distance learning and virtual companies higher education institutions will need to develop cooperative relationships with other institutions. He suggested that TQM principles such as cooperative teams and organizational transformation must be used to develop agile institutions, institutions ready to respond and adapt to improve their competitive positions through cooperation.

The applicability of the quality movement to higher education has also been criticized. Higher education consultant J. L. Fisher (1993) argued that TQM is potentially dangerous, especially if leaders adopt it believing it represents a quick fix for difficult problems. Fisher warned that TQM's emphasis on attributing problems to poor processes, not to people, minimizes the importance of individual performance, accountability, costs, and leadership.

Chickering and Potter (1993) expressed concern about the concept of the student as customer, warning against accepting the idea that giving students what they say they want is truly meeting the customer's need. They pointed out that the customer is not only the individual student but also the "collective social enterprise" (p. 35). They supported surveying students about their needs only if used as one piece of a broader base of information to determine what students need from the institution and what society needs from graduates. The success of TQM in academic areas is critically dependent upon understanding that meeting the needs of the customer does not mean focusing on the short-term desires of individual students.

The difficulties of implementing quality management successfully, the differences in levels of motivation for embracing quality management, and the cultural and structural differences between business and education have been studied. Marchese (1993) described total quality as "complicated, important, difficult to implement, and far from figured out" (p. 10). Coates (1996) pointed out that corporations turned to quality management because they felt change was necessary for survival. In contrast, although some of the same problems exist in education, colleges and universities do not have a perceived need that they must change or they will cease to exist (Marchese, 1993).

Carothers (1992) addressed those who are skeptical about the appropriateness of applying quality management on campus because of the mismatch of cultures existing between industry and education. He claimed that higher education can learn from the quality movement but also that the movement can learn from higher education. "American higher education has been and continues to be what TQM calls a 'benchmark' for the rest of the world" (p. 6). American universities are held together by shared vision and by values that shape behavior without coercion. Faculty are empowered employees, and their institutions invest heavily in their development. Quality management "incorporates a philosophy about work, people, and relationships built around humane values and shared vision" (p. 7) and is, therefore, appropriate for academic institutions. Carothers did concede that campuses must translate quality concepts such as focus on the customer and management by fact into language appropriate to an academic culture in order to incorporate a philosophy that relies heavily on the intellectual and creative abilities of people.

Implementation in Education

Continuous quality assurance first appeared in education about 1984 (Wolverton, 1994). Marchese (1993) cited the 1991-92 academic year as one of large increases in academic interest. The American Association for Higher Education (AAHE) first addressed quality management in 1989 (Marchese, 1992). In 1992, in response to the explosion of interest in CQI, AAHE co-founded the Academic Quality Consortium (AQC) in partnership with the William C. Norris Institute. The purpose of AQC is to provide campuses implementing CQI with opportunities to learn and work collaboratively to improve implementation of CQI. Support includes a summer academy that focuses on student learning (Summer, 2001, ¶8).

In 1991, the California Board of Governors authorized a Commission on Innovation to study ways to meet the challenges of the California community college system. Citing limited finances and rapid change, the Board called for a new perspective requiring profound change in the organizational culture of all the colleges. The Commission recommended that all community colleges adopt and implement the CQI philosophy (Commission, 1992). In 1993, two education journals, Educational Record and Change, published issues that focused on quality initiatives in higher education. In 1994 the Community College Journal of Research and Practice (CCJRP) published an issue devoted to the theme of TQM. Departing from its emphasis on research-based and practice-based articles, the journal presented a collection of what editor Lumsden (1994) described as "anecdotal and impressionistic accounts of what does and doesn't work and why" (p. iii). And, in 1994, the Ohio State University Center on Education and Training for Employment published a report on TQM in community and technical colleges based on its work with the National Alliance of Community and Technical Colleges. The

Alliance had focused on TQM as its theme for the previous two years (Coady & Hair, 1994). Brigham and Carusone (1996) wrote a resource guide to assist colleges and universities involved in CQI. The 120-page guide listed institutions, associations, and conference resources as well as print, audio, and video articles and references.

Studies of CQI in Educational Institutions

Studies of CQI implementation in education are primarily descriptive. Common elements in these studies include motives for adopting CQI, a description of the process, and the degree of implementation. Often schools turn to CQI because of declining enrollments or budget cuts; however, in some cases, highly successful institutions with reputations for innovation have also adopted the principles of CQI. Implementation most frequently begins in the service or business areas of the college rather than in the academic areas. The process involves commitment of the top leadership, training, development of teams, and redesigning planning and assessment activities. The majority of studies reported that after three to five years of involvement, most schools have just begun implementation.

Motivation for beginning total quality management at Syracuse University came from deep budget cuts and declining enrollments (Shaw, 1993). Chancellor Kenneth A. Shaw provided the impetus, and he involved his seven cabinet members. Early activities included training for the cabinet members and revision of the university's mission and vision. Syracuse also developed teams to identify problem areas and to propose solutions. Shaw emphasized the heavy time commitment, both in hours of training and in years of work, needed for full implementation. Syracuse first applied TQM to service areas, and Shaw reported that the institution was just beginning in academic areas.

Donald Entner, Director of the Center for Quality and Productivity at Delaware County Community College (DCCC) in Pennsylvania, described implementation at DCCC. In 1986 the college adopted the principles of TQM to transform its educational environment (Entner, 1993). In 1985, the president and executive staff committed to a year long study of total quality principles. By the end of the 1980s, DCCC was using these principles to develop and carry out its goals for the 1990s. In early 1990, the administration and the board of trustees spent 15 months redefining the college's philosophy, mission, and goals. All college planning and goals were integrated. DCCC used the 1992 Malcolm Baldrige Award Criteria for quality standards as a guideline for implementation. To meet the criterion of top management leadership and support, DCCC trained the executive staff and made quality management a part of cabinet activities and meetings. To integrate the organization's planning process, DCCC developed a ten-year plan for implementation that became a part of every department and of daily management processes. Entner reported that use of total quality principles in the curriculum and in classroom management was the last phase of this integration. In 1993, seven years after the college began developing its total quality (TQ) approach, 15 of 120 full-time faculty had used some TQ concepts and tools in their classrooms. DCCC has identified students as a major customer and has developed numerous methods of surveying students before, during, and after their time at DCCC. The college engages in many types of employee training and recognition and has empowered employees through quality teams that work to solve college problems. Team successes include redesigning the phone system so that student calls were not lost, reconfiguring parking assignments for more efficient use of space, improving classroom scheduling and room assignments, and centralizing copy

facilities. President Richard DeCosmo supports claims that integrating total quality into an academic environment requires persistence, commitment, and strong leadership (Entner, 1993).

Seymour (1993a) reported on three institutions that had committed to continuous quality improvement: Georgia Institute of Technology, Pennsylvania State University, and the University of Maryland. All are successful institutions, but all found major areas that needed improvement. In part, Georgia Tech's motivation for implementing CQI came from its anticipated global exposure as it served as the site for the Olympic Village in the 1996 summer Olympics. Despite its successful recruiting of highly qualified freshmen and its sound research resources, a comprehensive analysis of the university and its programs exposed numerous weaknesses. In 1987, President Pat Crecine began to shift Tech's focus using CQI. Retention, particularly of minorities and women, became the primary goal. Seymour described a successful program that continues to look for ways to improve. Interest in TQM at Pennsylvania State University began in the Smeal College of Business Administration when its dean met with others to draft a proposal for an IBM Total Quality Management Competition. By 1991, Pennsylvania State University had many operational pieces of CQI in place. To expand its integrated vision, Penn State began analyzing its relationships with its input source, the high schools, and with its output resource, employers. College leadership is strongly supportive and willing to "walk the talk" (Seymour, 1993a, p. 21). President William Kirwin leads the CQI initiative at the University of Maryland. His motivation is his belief that cultural transformation of their "educational strategy and institutional infrastructure" (p. 25) is necessary to meet the global marketplace demands of the new century. Maryland has

successfully implemented a number of initiatives and improvements and has become a nationally recognized center for training and research on the topic of quality. Despite the examples of successes on these three campuses, Seymour pointed out a troubling "disconnection between institutional goals and individual goals" (p. 27), a confusion of activities with results, and a lack of urgency to change, particularly among faculty. He saw an unwillingness to confront the reward systems that discourage collaborative work and that cause measurements to be seen as a way to rank and punish rather than reward.

The University of Wisconsin's Graduate School admissions office chose TQM tools and techniques to help personnel redesign a "runaway" admissions process. Nagy et al. (1993) reported a successful redesign of the graduate admissions process at the University of Wisconsin. Using quality tools and processes over a two-year period, a team representing all areas affected by graduate school admissions simplified processes and improved efficiency at all stages. The success represented "a shift in thinking from working harder and longer to working better" (p. 40).

Maricopa County Community College District is a 10-college system serving 180,000 students a year in the Phoenix area (Assar, 1993). It is considered one of the best systems in the country, and its chancellor, Paul Elsner, is highly regarded as one of the most effective college leaders in the nation. Continuous Quality Improvement began in the Maricopa system in 1991 largely as a result of the interest of Linda M. Thor, President of the Rio Salado campus. Thor began administrative and classroom implementation of TQM in March 1991 (Thor, 1994b). By April 1993 all full-time and some part-time employees at Rio Salado had gone through 40 hours of training in TQM's basic concepts and tools, and more than a dozen quality-improvement teams had been

formed to improve various college processes. Chancellor Elsner began a system-wide "Quantum Quality Initiative" in 1992, a program intended to focus on effective teaching and learning (Assar, 1993). Maricopa trained administrative and faculty leaders and established quality coordinators throughout the system (Assar, 1993). Leaders in the Maricopa district stressed the need for training, for patience, and for persistence, and Chancellor Elsner and Board Chair Grant Christiansen both stressed the need for total commitment from top leaders.

Thor (1994a) said that CQI promotes a shared vision, a focus on the customer, and employee involvement in decision-making. Increased teamwork and employee empowerment are major benefits of CQI, and training becomes an integral part of the institution's processes. Although the leader relies on data and measurement for decision-making, leadership remains an art form. The leader must understand how to face crisis and must be willing to lead others to overcome crisis. Major barriers include heavy time commitment, a general aversion to change, reluctance of middle management, and overall underlying attitudes (Thor, 1994a). Thor stated, "the failure of the leader to lead is one of the chief causes of failure in TQM implementation" (p. 363).

Entin (1993) looked at 10 colleges and universities in the Boston area that began implementing TQM in 1990-91. In most cases, interest to begin CQI came from a strategically placed administrator and the president. Programs started with the training of senior institutional managers, and most used outside consultants. According to Entin, these schools, though already involved in TQM for two or three years, described themselves as just beginning the process. He found that academic fields more closely connected to business and industry, such as business administration, management, and

engineering, were the only ones involved in TQM. No liberal arts faculty were involved. He also found that when presidents had to address crises immediately, they abandoned TQM in favor of more traditional methods. Entin warned that the high degree of skepticism and opposition from core academic units made success in educational institutions difficult. For TQM to succeed in academic institutions, "two conditions are necessary: college presidents must perceive TQM as a means to solve major problems facing their institutions; and senior academic affairs administrators and faculty must believe TQM is related to their concerns and interests" (p. 31). Entin stressed the need to invest five or more years in the first stages and another five to integrate the process completely.

President Sam Schauerman and Staff Developer Burt Peachy (1994) implemented TQM at El Camino College in Los Angeles County over a 4 ½ year period. During that time they trained 73% of the support staff, 98% of management, and 23% of faculty. They reported that most process improvement teams were related to the support services side of the college and that they had difficulty convincing full time faculty to accept the TQM philosophy. However, some El Camino faculty have used classroom assessment techniques and have developed an initiative in classroom assessment. The college also adapted Baldrige award criteria as benchmark criteria (Schauerman & Peachy, 1994).

LeTarte and Schwinn (1994) reported on the first four years of implementing TQM at Jackson Community College in Michigan. The process began with the hiring of a new president, Dr. Clyde E. LeTarte, who brought an interest in a more participatory management system than had previously existed at the college. Although successful implementation depends on all people at all levels, the commitment of management is the

key factor. They cite the most significant benefit to be the renewed excitement about learning that began to occur. Implementation placed the initial focus on problem prevention and eventually shifted to focusing on improvement and innovation. LeTarte and Schwinn stressed the importance of understanding institutional systems and of using systems thinking. They also stressed the need for team involvement and team learning throughout the organization. They cautioned that educational institutions cannot directly transfer the business model of TQM. Rather, leaders must learn the theory and translate it to the particular systems associated with teaching and learning. For example, they claimed that the concept of customer satisfaction cannot be incorporated into an educational plan without some modification that recognizes that students are not the only interpreters of quality or of appropriate service. The educational model must recognize external standards derived from a variety of customers of education. LeTarte and Schwinn also felt that long-term commitment in an educational institution is more difficult than in industry because of changing public boards and legislative measures.

Coady and Hair (1994) described implementation efforts at Edison Community College in Ohio and Savannah Technical Institute, respectively. Implementation at Edison began with the president's commitment to change the culture and values. Efforts stressed training, communication, values development, assessment, empowerment, and team development. Five years into the process, Coady indicated changes were just beginning, primarily because the institution had to undergo a complete transformation from an autocratic organization. Savannah Tech began implementing TQM in part because its Development Center was teaching the concepts to business and industry. Hair

(Coady & Hair, 1994) stressed the importance of the vision of the president and cited the difficulties associated with translating that vision to the faculty and the classroom.

Fallo (1997) studied the implementation of CQI in a random sample of schools in the Continuous Quality Improvement Network (CQIN). Fallo surveyed 11 of the 28 member institutions. His results indicated that most schools had considerably more work to do before they would be clearly functioning as continuous quality institutions. Fallo also reported that all 11 schools cited the chief executive officer as the key factor to implementing CQI and that continued support and leadership from the CEO was critical to continued progress.

These 10 reports of efforts to implement CQI principles into colleges and universities underscore the need for total commitment, training, and widespread involvement of personnel. All indicated that leadership and team development are key factors for success. However, they did not describe the qualities, traits, or characteristics needed by these leaders.

Studies of Barriers to Implementation

Steven E. Brigham (1994a), Director of the Continuous Quality Improvement Project at the American Association for Higher Education, analyzed the mistakes and accomplishments found in industry's attempts to implement TQM. The literature he reviewed concluded that often implementation of TQM has been deficient, but researchers did not conclude that the TQM philosophy itself is seriously flawed. He cited lack of leadership as the primary reason for failure. Total Quality Management requires active leaders who shape the strategy and support the process. Other mistakes included involving middle managers without adequate training or commitment and requiring employee training without providing opportunities for employees to use the training in

meaningful ways. Concentrating on changing processes to the exclusion of assessing results and failing to include external customers as well as internal ones were additional mistakes. Brigham (1994a) found evidence that TQM can and does work in reports such as a three-year quality study conducted jointly by Ernst and Young and the American Quality Foundation and in a General Accounting Office report indicating that the highest-scoring applicants for the 1988 and 1989 Malcolm Baldrige Award were among the most successful in the nation in areas such as employee relations, productivity, customer satisfaction, market share, and profitability.

Marchese (1993), who studied implementation in higher education, reinforced the idea that implementation of CQI is difficult and time consuming. To succeed, higher education leaders must be willing to make the commitments required, and they must not avoid or delay implementation in the core mission of teaching and learning.

Peter T. Ewell (1993), senior associate at the National Center for Higher Education Management Systems in Boulder, Colorado, provided an analysis of the slow success of TQM in higher education. While some academics claim that education is well suited to quality improvement and already engages in many of TQM's tenets, Ewell claimed that many educational processes are not easily adapted to TQM. For example, faculty may be an empowered workforce, but work teams and cooperative, cross-functional strategies contrast sharply with individual faculty autonomy and the traditional isolation of disciplinary departments. Ewell also contrasted TQM's focus on identifying core processes and how they work with teaching and learning functions. The curriculum is rarely seen as a process, especially one to be influenced by other processes, both internal and external to the department or institution. Ewell said that academic research is

a valid example of continuous improvement, but he does not see a similar commitment in undergraduate education. Reducing variation is another TQM concept that seems to apply in some places but not others. Reduction in variation is seen as a valid goal in basic, prerequisite, or professional skills, but in the realm of higher-order thinking and the liberal arts, the development of individual voice and style is valued. Perhaps the greatest concern in academic institutions has centered on the concept of serving customers. Students are customers of many administrative processes such as registration and counseling, but the term does not clearly fit inside the classroom. Despite these differences, Ewell suggested that the traps can be avoided and that education can develop its own version of quality management that can offer rich potential for improvement.

Entin (1994) returned to the 10 institutions he first studied a year earlier and found that five had stopped or delayed implementation. Four displayed some level of implementation in some units, and only one claimed to be achieving systematic implementation. He did find examples of projects or improvements at all 10 schools that had occurred as a result of continuous quality improvement, but he also found that top managers tended to abandon TQM when they had to face crises such as major budget cuts, employee layoffs, and declining enrollments. In the tenth college, the president continued to be involved and to support TQM efforts throughout the institution. Strong faculty opposition to TQM concepts and disagreement over the concept of the student as customer led some school leaders to believe that TQM is not suited to higher education.

Entin (1994) identified several reasons for these results. Some campuses began with only a superficial understanding of and training in TQM. In addition, the culture of academic institutions is not conducive to the approach, particularly since faculty often

feel untouched by the larger problems facing their institutions, and, finally, many schools began using TQM to solve isolated problems rather than to initiate larger, more permanent, changes in the structure and culture of the institutions. Entin did state that the changes that have occurred have all been seen as positive and that these institutions have not yet invested the 10 years that many advocates say are necessary to impact the culture.

Hammons (1994) stressed the need for everyone involved to have a clear understanding of what TQM is and what is involved. Hammons listed 18 prerequisites necessary for successfully implementing TQM. All of them involve the commitment and involvement of top administrators. Hammons warned that TQM has the potential for causing trauma and that it requires a substantial length of time before results are seen; therefore, he advised that colleges should be healthy enough to withstand trauma. He concluded that colleges experiencing major problems should look to other solutions. He said that TQM requires a cultural transplant; the culture of the organization is the primary barrier to implementation.

Van Allen (1994) concluded that reported problems of implementation of CQI were a product of inadequate leadership rather than of defects in the TQM model. He found that the inability or unwillingness of leadership to manage change in organizational culture was the primary cause of frustrations and failures.

Horine and Hailey (1995) surveyed 160 colleges and universities at various stages of implementing quality management practices. They identified five key challenges: organizational culture, senior leadership commitment, faculty support, implementation time, and training. They reported the greatest challenge for leaders was to change the

organizational culture and that the greatest cause of failure was lack of support from top management.

Peterson (1993) also concluded that developing continuous quality assurance is more than adopting a new management style; CQA requires a different philosophical approach to all aspects of an organization. He concluded that those businesses and industries that have been most successful in achieving profitability through TQM had CEO's who became the chief quality officer. The CEO must assume responsibility on a day-to-day operating level because TQM requires major revision of the traditional administrative organizational structure. The president must adopt a philosophy of helping people do a better job as opposed to the traditional role of supervising their performance. Total Quality Management requires acceptance of the team approach by every member of the president's immediate staff, especially the operational deans and vice presidents. Finally, presidents must develop a vision that is consistent with the unique circumstances and history of the institution.

Wolverton (1994) found that CQI in education has focused mostly in administration and student support. She looked at classroom CQI efforts at six institutions. She found evidence that CQI implementation led to viewing learning as a continual process, to providing ongoing professional development opportunities, and to fostering a collegial working environment. However, faculty also reported misgivings about standardization, benchmarking, the emphasis on customer focus, and the time and effort required for training and working in teams.

These eight studies highlight the challenges associated with implementing CQI in educational institutions. These challenges involve change and leadership. Spanbauer

(1994), as President of Fox Valley Technical College, was one of the earliest adopters of TQM into education. He summarized many of these concerns describing implementation of total quality as a paradigm shift that challenges cherished traditions. He believes that TQM fails if the leadership fails to maintain a delicate balance between the technical and human/social aspects of the total quality philosophy. Successful implementation requires leadership, vision, and continued assessment. Spanbauer said that it is essential to distinguish between management and leadership and that the transformational use of power, as contrasted to transactional power, is a central element of success. He further described leaders as needing vision and integrity. They must empower others, practice intensive listening, and embrace the ethic of service. Spanbauer described leadership as flowing from those being led; he said that leaders must change, particularly in their relationships with others. Spanbauer also stressed teamwork. Teamwork involves cross functional groups working together to solve problems, sharing decision making, and empowering individuals.

Burgdorf (1992) also called for redefining leadership for CQI. Burgdorf described the systems approach as flowing more horizontally than vertically. Traditional hierarchies encourage vertical communication. Top managers should work on improving the system by enlisting the help of employees who work in the system. Leadership involves serving as a resource, facilitating, leading a team, coaching, counseling and leading rather than directing, rewarding, and punishing.

Babione (1995) and Farmakis (1995) both studied the effect of implementing TQM on the culture of an educational institution. They both concluded that TQM does not necessarily transform an institution from a culture of mistrust to a more positive

climate. However, both concluded that the efforts by the CEO and attention to the cultural climate can overcome a negative culture, thereby making it possible to implement TQM.

These studies indicate that a major challenge to successful implementation of CQI in education is recognizing that CQI is more than a change in management style. It requires a cultural change, and the change must be integrated throughout the organization, not isolated in certain areas. The change takes time. Most importantly, the change requires the full commitment of the leader, and it requires a leadership style that is participatory and team oriented.

The Malcolm Baldrige Award Criteria in Education

For the past 10 years, eligibility categories for the Malcolm Baldrige Award included manufacturing companies, service companies, and small businesses (NIST, 1998). Recently, Baldrige criteria were developed for education. The Malcolm Baldrige National Quality Award Education Criteria for Performance Excellence were piloted beginning in 1995 and were revised in 1998 and are now modified annually as needed. The seven categories are Leadership, Strategic Planning, Student and Stakeholder Focus, Information and Analysis, Faculty and Staff Focus, Educational and Support Process Management, and School Performance (Education, 2001). In October 1998, the federal government passed legislation that authorized the National Institute of Standards and Technology (NIST) to establish and manage Baldrige awards for performance excellence for education and health care provider organizations (NIST, 1998). In 1999, the award was opened to these two groups. Although none received the award in the first year of competition, 16 educational institutions and 9 health care organizations did submit applications (Kosko, 1999). In 2001, however, three of the five Baldrige Award winners

were in the education category. They included two public school districts and a branch campus of a state university (Kosko, 2001).

Like the criteria for business and industry, the criteria for education can be used to guide and assess quality initiatives (Holmes, 1997; Moore, 1996; Paris, 1996; Thompson, 1995; Winn & Cameron, 1998). The Criteria provide a means for an educational institution to be measured on its successful implementation of quality principles. The educational award criteria have been shown to be appropriate to the philosophy and goals of educational institutions (Holmes, 1997; Moore, 1996; Thompson, 1995; Watwood, 1996). A number of institutions, including Delaware County Community College (Entner, 1993), El Camino College (Schauerman & Peachy, 1994), and Austin Community College (Fisher, D. C., 2000) have adopted Baldrige award criteria as benchmarks or guidelines for quality implementation.

Thompson (1995) surveyed the senior administrators in Georgia's 32 technical colleges regarding the pilot criteria. The administrators in her study said that the Malcolm Baldrige National Quality Award Education Pilot Criteria as a whole, each of the seven categories, and each of the 28 criteria were all appropriate for measuring quality in their institutions.

Moore (1996) studied the use of the criteria at San Juan College. In 1994 and 1995, San Juan College participated in the Quality New Mexico Award process. She concluded that use of the criteria help institutions avoid many of the mistakes institutions typically make when implementing TQM. Instead of focusing on statistical tools and quality processes, the criteria place the focus of attention on values, processes, and results and thus provide a conceptual framework for an action planning process. Moore

concluded that use of the criteria at San Juan College focused attention on values, processes, and results. She also concluded that the process San Juan College used to win an award at the state level was more rigorous than the reaccredidation process because reaccredidation was based on meeting minimal standards whereas the Baldrige Criteria required the institution to continuously strive toward the highest standards.

Watwood (1996) concluded that the award's focused, linked framework can also be used as a model for program development, review, and assessment in various units, levels, and types of colleges. Watwood stated that because the criteria focus on process rather than product, their use can help a college move from crisis management to continual improvement.

Holmes (1997) also concluded that the criteria are appropriate for higher education and should be used to meet the challenges of the present and the future. Winn and Cameron (1998) studied the validity of the relationships between MBNQA criteria and higher education data and developed a model for managing quality-improvement initiatives.

Seymour (1996) described the award criteria as a "systematic way to pursue performance improvement" (p. 9) through the codifying of "performance-improvement principles" (p. 12). Brigham and Carusone (1996) devoted a section of their resource guide to the Baldrige and the more than 20 state quality programs patterned on the Baldrige. They reinforced Seymour's assertion that the Baldrige is an important framework for affecting institution-wide change in higher education.

Summary of Continuous Quality Improvement in Education

Despite the interest in continuous quality improvement and the positive interest in the use of the Baldrige Criteria in both business and education, widespread

implementation of quality improvement has been limited. Seymour (1994) reported that although 7 in 10 educational institutions surveyed were using principles of total quality management, only 1 in 10 were using those principles extensively. Juran (1995) felt the quality initiatives of the 1980s were deeply disappointing. Coates (1996) reported the success rate of implementing quality improvement in business and industry at 20% to 40%. Juran (1995) traced the disappointing results to "limitations of leadership by upper managers" (p. 586). Linda Thor (1994a), President of Rio Salado Community College, stated that one of the primary causes of the failure of implementation of Total Quality Management is the failure of the leader to lead.

Study of Leadership

In his 1978 book on leadership theory, Burns wrote, "leadership is one of the most observed and least understood phenomena on earth" (p. 2). Rost (1990) reviewed over 500 books, chapters, and journal articles that were written about leadership in the 1980s and early 1990 as well as the works of Stogdill, Bass, and Gibb and concluded that the underlying concept of all these studies views leadership merely as good management. Sergiovanni (1992) said that the study of leadership "represents one of social science's greatest disappointments" (p. 2). Yukl (2001) claimed the research is "beset with confusion and ambiguity" (p. 440). Roueche et al. (1989) concluded that leadership skills can be taught and acquired on the job but that more research is needed to identify and understand exceptional CEOs. According to many researchers, there is still no agreement on how leadership can be defined, measured, assessed, or linked to outcomes (Bennis & Nanus, 1997).

Theories of Leadership

Mitchell (1990) concluded that contemporary studies support one of two theories of leadership: leaders are born or leaders are made. Those who lean toward the "leaders are born" theory are concerned with intellectual abilities and personal traits that must be nurtured. Those who believe "leaders are made" are concerned with managing behaviors and interpersonal relationships in identified situations and scenarios. Wills (1994) also identified two primary models of leadership. They are the superior-person model and the ingratiating-person model. The superior person must become worthy of being followed by being more disciplined and committed than others. The ingratiating person learns persuasive skills that win friends and influence people. Some theorists, including Rost (1990), Senge (1990) Wills (1994), and Tierney (1999) believe effective leadership also acknowledges the followers, who have some input into the goal to which they are being led.

A frequently used method of reviewing the theories of leadership is to group research approaches into distinct categories such as trait studies, behavioral studies, contingency or situational studies, and power and influence studies (Bensimon, Neumann, & Birnbaum, 1989; Birnbaum, 1988; Yukl, 2001).

Trait theories identify personal characteristics that are believed to contribute to a person's ability to succeed in a leadership position (Birnbaum, 1988). Research in the 1930s and 1940s focused on discovering particular attributes possessed by successful leaders. Yukl (2001) attributed the general failure of these studies to research designs that failed to account for intervening variables and explanatory processes. Trait theory became less dominant in leadership studies in the following decades. However, Bass (1990) noted a renewed interest in personal factors of leaders. Yukl (2001) indicated that

better designed research studies in the 1980s and 1990s have provided insights into the relationship between leadership attributes and leadership behavior and effectiveness. Bensimon, et al. (1989) noted that although trait theory may not be a researcher's primary focus, identification of specific traits continues to be influential in works describing effective leadership in higher education. Bass (1990) concluded that "personality traits differentiate leaders from followers, successful from unsuccessful leaders, and high-level from low-level leaders," (p. 86) but he also stated:

> Some of the variance in who emerges as a leader and who is successful and effective is due to traits of consequence in the situation, some is due to situational effects, and some is due to the interaction of traits and situation. (p. 87)

Behavioral theories examine what leaders do; they describe activity patterns, managerial roles, and behavioral categories (Birnbaum, 1988). Studies of leadership behavior focus on the nature of managerial work or on the behaviors of effective and ineffective leaders (Yukl, 2001). The Ohio State University leadership studies conducted in the 1940s provide a foundation for behavior research (Yukl, 2001). Factor analysis of questionnaire responses indicated that supervisors function in two primary dimensions, one that focuses on the work to be done and the role of the leader and follower in doing the work, and one that focuses on the relationship between the leader and the follower. These and other studies concluded that task orientation and relationship orientation are two independent behavior categories and that leaders could demonstrate any mix of both dimensions. A number of taxonomies have been developed that include additional factors such as the nature of the situation or environment, the nature of the task, and the qualities of the followers (Yukl, 2001). Managerial behaviors are then identified on a continuum ranging from highly directive to highly participative. In a 1975 study, Bass, Valenzi,

Farrow, and Solomon identified five leadership styles: directive, delegative, consultative, participative, and negotiative. These styles have been shown to be distinctive, but they are not mutually exclusive (Bass, 1990).

Situational and contingency theories are closely related to behavioral theories. Situational studies describe the importance of factors such as the nature of the task or the external environment rather than the personal qualities of the leader (Bensimon et al., 1989; Birnbaum, 1988). Contingency studies assume that the effectiveness of behaviors differ in relationship to the situation (Yukl, 2001). Hersey and Blanchard (1993) developed a model for situational leadership that directs leaders to employ varying levels of guidance and support (task vs. relationship) dependent upon the level of readiness (ability and willingness) of the followers.

Power and influence theories describe the source and amount of power the leader has as well as the manner in which power is used (Birnbaum 1988). Power and influence studies examine the levels and types of power that leaders exhibit and may also explore the levels and types of power that followers exhibit (Yukl, 2001). Social power theory and transformational leadership theory describe the leader's influence on followers; social exchange theory and transactional leadership theory describe the mutual influence and reciprocal relationships between leaders and followers (Bensimon et al., 1989).

James MacGregor Burns is credited with initially defining the difference between transformational and transactional leadership (Fisher, J. L. & Koch, 1996). Burns (1978) defined leadership as a relationship based on power. "Leadership is exercised when persons with certain motives and purposes mobilize, in competition or conflict with

others, institutional, political, psychological, and other resources so as to arouse, engage and satisfy the motives of followers" (p. 18).

Transactional leadership involves an exchange of one thing for another. The exchange could be economic, political, or psychological (Burns, 1978). Transactional leadership stresses reciprocity and mutual influence (Bensimon et al., 1989). In transactional leadership the object is to form a bargain to aid the individual interests of persons or groups going their separate ways. Transactional leaders focus on fulfilling expectations. Transactional leadership emphasizes means (Birnbaum, 1988, 1999).

Transformational leadership stresses actions being initiated by the leader. The leader recognizes the needs or demands of a follower and involves the follower in satisfying those needs. By engaging the follower, transformational leaders seek to raise both leaders and followers to higher levels of motivation and morality (Bensimon et al., 1989; Burns, 1978; Fisher, J. L. & Koch, 1996). Leaders can also shape, alter, and elevate the motives, values, and goals of follower (Burns, 1978). The premise of this leadership is that people's separate interests are united in the pursuit of higher goals, resulting in significant change that represents the interests of both leaders and followers (Burns, 1978). Transformational leaders focus on changing expectations; transformational leadership emphasizes ends (Birnbaum, 1988, 1999).

Burns's definition of leadership involves both the leader and the follower. Studies of transformational leadership are concerned with the leader and with the leader's influence on the follower. Rost (1990) argued that the postindustrial world requires a new understanding of leadership. He suggested expanding the concept of leadership as defined by Burns. Rost emphasized the connection among leaders and followers. Leadership is

"an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (p. 102). Rost explained that the relationship is a noncoercive, multidirectional one between leaders and active followers. Rost stressed the importance of developing mutual purposes; therefore, the relationship between leaders and followers is noncoercive.

Rost (1990) also suggested that studying this kind of leadership requires that scholars experiment with different research designs and methodologies that are grounded in "what is real, what actually happens when leaders and followers do engage in leadership" (p. 183). These scholars should become parts of teams that include training and development experts who translate the theory into action as well as practitioners who implement the theory and then reflect critically and provide feedback to scholars and trainers (p. 184).

Other scholars have also expressed concern regarding the nature of the studies that have been conducted. Studies often focus on an individual person or a particular theory or are based on the perceptions of leaders themselves. Pierce and Pederson (1997) stated, "As a body, this literature [on presidential leadership] has become steadily narrower in its focus, with individual works focusing on specific skills or detailed methodologies for the management of change" (p. 14). However, Bass (1990), who cited over 7,500 studies, concluded that "research on leadership and its widespread applications are coming of age" (p. 879) and that current research designs and approaches provide the potential for further understanding.

Robson (1996) argued for a broader perspective for the study of leadership; he stressed the cultural context in which leadership occurs. Wharton (1997) said that the

relationship between successful leadership and institutional effectiveness should be explored.

Traditional theories of leadership and traditional definitions of leaders are inadequate for current and future organizations (Elsner, 1984; Gratton, 1993; Rost, 1990). A new understanding of leadership and new methodologies to study it are needed. Research approaches cannot focus solely on distinct categories such as trait theories, behavioral theories, contingency or situational theories, and power and influence theories; they cannot focus on individual persons; and they cannot focus solely on the perceptions of leaders themselves. Studies must be concerned with the leader, the leadership team, the followers, and the needs of the organization.

Leadership and Organizational Change

Leadership theory must address the manner in which organizational change is managed (Elsner, 1984). Burns (1978) stated that the leadership process is the carrying through from decision-making stages to points of concrete changes in people's lives, attitudes, behaviors, and institutions. Leadership brings about real change that leaders intend. According to Burns, the leader's ultimate role in social change depends on his or her ideological leadership, including the degree to which he or she makes an appeal as idol and hero to serve the purposes of both the leader and the followers.

Seymour (1994) claimed that when individuals are confronted with new ideas that conflict with an existing culture, the status quo usually prevails. Leaders must shape the new vision and lead the organization to it. According to Joel Barker (1992), "You manage within a paradigm. You lead between paradigms" (p. 4).

One of the major distinctions between management and leadership, according to John Kotter (1990), concerns change. Management strives for consistency and order.

Leadership produces movement. Leadership is effective when it moves leaders and followers to a place where both are better off. Leaders develop interdependence with followers, aligning them to move together in the same direction. And leaders motivate and inspire people so that they will have the energy to overcome obstacles. This concept of leadership acknowledges multiple roles for both followers and leaders. Leaders coordinate the roles.

Rost (1990) associated the leader as manager with the industrial paradigm. That paradigm no longer serves the needs and values of the postindustrial world. Postindustrial values include, among others, collaboration, diversity, active participation from all levels, client orientation, and on-going dialogue.

Rost (1990) focused on the nature of leadership as a dynamic relationship and addressed change as a worldwide event. The world is "being transformed by a massive paradigm shift in societal values" (p. 181). Therefore, Rost is concerned with identifying the kind of leadership that will be needed in what he describes as a postindustrial world.

> The values of the industrial paradigm are characterized by the following: a structural-functionalist view of organizations, a view of management as the preeminent profession, a personalistic focus on the leader, a dominant objective of goal achievement, a self-interested and individualistic outlook, a male model of life, a utilitarian and materialistic ethical perspective, and a rational, technocratic, linear, quantitative, and scientific language and methodology. (p. 180)

The shift now occurring suggests an increase in values such as "collaboration, common good, global concern, diversity and pluralism in structures and participation, client orientation, civic virtues, freedom of expression in all organizations, critical dialogue, qualitative language and methodologies, substantive justice, and consensus-oriented policy-making process" (Rost, 1990, p. 181).

Peter Senge's The Fifth Discipline (1990) also described a new paradigm, the learning organization. Successful organizations are those that address change; these organizations require new management ideas based on the learning organization. According to Senge, the learning organization can arise from an extension of total quality concepts. Senge rejected the traditional view of the leader as a hero who sets the direction, makes key decisions, and energizes the followers. Leaders are designers, stewards, and teachers. They build or design the organization, including the vision, values, and purpose. They improve team learning, starting with their own vision but expanding to the larger vision developed through team learning. They also teach people to see the bigger picture and where to focus their attention by fostering learning. Senge stated that the top managers' values, behaviors, and publicly stated vision should be the basis for freeing up the authority context of the organization enough to stimulate others to reflection and invention. Senge described the learning organization as one in which "people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p. 3). The learning organization depends on five systems: systems thinking, personal mastery, mental models, shared vision, and team learning.

O'Banion (1997) described organizational change needed in the community college. He advocates the learning college. To achieve a learning college, leaders must flatten their organizations, empower individuals, develop collaborative processes, commit to quality, and make learners of the stakeholders. O'Banion said that the foundation for creating a learning college is significantly strengthened when colleges are already

engaged in complementary processes found in TQM and learning organizations. O'Banion warned that the learning organization is the antithesis of hierarchical and authoritative models that have guided American institutions for decades (p. 81).

O'Banion (2000) provided an inventory of benchmark activities and questions for institutions committed to becoming learning-centered. O'Banion's final point emphasized the key role of presidential leadership which is essential to carrying out all the activities.

Freed and Klugman (1997) encouraged cultural change through the adoption of Senge's learning organization principles. Lorenzo and Zajac (1996) described decentralization of leadership authority, increasing emphasis on conflict resolution, and facilitation of individual and organizational learning as well as a shift from an attitude of independence to one of interdependence. They reported that the top areas of emerging leadership center on resolving conflict, promoting collaboration, and assuring equity and justice.

According to Napier et al. (1998), creating meaningful change is perhaps the greatest challenge of all in higher education. Traditional cultures, reward structures, and decision-making practices have led to increasing specialization and fragmentation that inhibit change in most institutions. Curriculums and administrative practices alike have suffered from divided loyalties and narrow frames of reference that make coordination and coherence in direction difficult to achieve.

Ruiz (1999) concluded that for change to be supported internally, the transition must reinforce internal values. She also stressed the importance of communication and of having a clear strategic plan.

Schein (1992) said that leadership is the fundamental process by which organizational cultures are formed and changed. Likewise, groups cannot adapt to changing environmental conditions without leadership.

> Leaders communicate assumptions they hold through what they pay attention to and reward, through the role modeling they do, through the manner in which they deal with critical incidents, and through the criteria they use for recruitment, selection, promotion, and excommunication. (p. 242)

According to Schein (1992), changing the culture requires involvement and participation of the leader. Leaders and followers must be learners:

> My sense is that the various predictions about globalism, knowledge-based organizations, the information age, the biotech age, the loosening of organizational boundaries, and so on have one theme in common—we basically do not know what the world of tomorrow will really be like except that it will be different. That means that organizations and their leaders will have to become perpetual learners. (p. 361)

Learning leaders must develop effective communication systems and must determine what kind of information is needed to solve problems (Schein, 1992). The learning leader assumes that "the world is intrinsically complex, nonlinear, and overdetermined" (p. 372). Since a changing environment is complex and interdependence is high, both task and relationship orientations are critical.

Wharton (1997) also stressed the commitment of followers as crucial to the success of leaders. "The environmental challenges community college leaders face demand . . . energy, commitment, and performance" (p. 27) for leaders and staff.

The recognition that change has become necessary to successful organizations has focused some leadership studies on identifying the characteristics and traits needed for successful leadership in the future. In addition, discussion of leadership in change

situations leads to a focus on process as well as on the leader's characteristics or behaviors.

Bennis and Townsend (1995) contrasted new leaders with old. They described a shift from those who think they have all the answers and get all the benefits to those who can conduct their staff to find their own answers. They described both characteristics and process. The great leader has to have a strong set of convictions, a devoted constituency, and the capacity to gain broad support for his or her goals. The qualities needed include character, experience, intelligence, and energy. Traits of the leader of the future include intelligence and the ability to be articulate. The leader must keep personal ambition under control and must be a servant to his or her people. The leader must be a mentor, have a sense of humor, and be inclusive. The leader must exhibit toughness and protect his people, and he or she must be fair. The future leader's ambition must be directed toward helping associates succeed in reaching the organization's goals. The leader must also have a high level of competence and expertise as well as integrity.

Bennis and Townsend (1995) defined leadership as "the capacity to create a compelling and plausible vision and to translate that vision into organizational realities" (p. 27). The leader must have the ability to generate and sustain trust, to be agile and adaptive; and to be open to diverse points of view. The leader must also be decisive and self-aware.

Tierney (1999) advocated organizational redesign for all colleges and universities. He described the leadership needed for redesign. Leadership must occur at multiple levels and through multiple people, not just through the president. He also said leadership is a

process that is comparative and reciprocal. "A restructured organization needs leaders who are designers of protean structures capable of change and modification" (p. 57).

Based on interviews, meetings and focus group discussions conducted on campuses across the country, Carter and Alfred (1996) concluded that in addition to traditional responsibilities, community college leaders must take on new roles. Those roles include addressing change and empowering others. Leaders must be healers who restore faith and trust among groups and with individuals on campus; they must be bridge builders who develop connections between and among groups. They must be learning leaders who keep themselves and others well informed about external and internal trends and conditions. They must be interpreters who translate the movements and trends to all levels in the institution. They must be innovators who lead others into understanding and participating in fundamental change.

Leadership in Educational Institutions

In his work on organizational theory and college governance, Birnbaum (1988) pointed out that little of the extensive research on leaders has focused on educational leaders. He also noted that the nature of the educational enterprise is not conducive to leaders and followers but rather to constituents. Birnbaum suggested that the very nature of colleges and universities makes their management difficult and that attempts to improve management "may reduce rather than increase effectiveness" (p. 202). Because of the nature of educational institutions, Birnbaum claimed they "tend to run themselves" (p. 196) and that presidents have relatively little influence over outcomes when compared to other forces. The authority of the president is restricted by external forces such as resources and governmental control as well as by internal forces such as the professional

authority of professors. The limits of what a president might achieve are defined by "where their institutions and society permit them to go" (p. 17).

Birnbaum (1988) explored four models of organization and governance: the bureaucracy, the collegium, the political system, and the organized anarchy and suggested a model that integrates all of them. The cybernetic model emphasizes systems. Feedback loops monitor organizational functions and provide data that lead to correction. The role of the president is de-emphasized in favor of functional subsystems. Changes result from bringing systems back into balance. "Cybernetic institutions tend to run themselves" and leaders need only "pay attention to what is wrong" (p. 196) and make adjustments. Birnbaum stressed transactional leadership, but recommended transformational leadership in times of crisis or imbalance.

Roueche, Baker, and Rose (1988) also claimed that leadership in colleges is complicated by the nature of educational institutions. Educational goals seem ambiguous because they are not product-oriented; the institutions are vulnerable to external influences; decision-making authority is decentralized; and, especially in community colleges, the students have widely varying backgrounds and needs.

Bensimon et al. (1989) further explained the problematic nature of studying leadership in colleges and universities. Colleges are complex organizations often having dual control systems. Conflicts exist between professional and administrative authority. Education systems often have unclear goals with vaguely defined measures of outcomes. These researchers claimed that most presidents tend to accept a traditional and directive view of their roles. Few presidents emphasize the importance of two-way

communication, of social exchange processes, or of facilitating rather than directing the work of professionals.

Levin (1995) conducted a number of studies that explored the influence of presidents on their community colleges and reported that they do make a difference and that the difference can be positive or negative. In one case the change was viewed as a major cultural change. He also concluded that influence is most likely to occur when institutions change presidents. Levin pointed to several reasons for a leader's ability to exert influence on a community college. Unlike universities, community colleges lack a strong department-based academic culture; they have few deep-rooted traditions; and they are adaptable, flexible, and responsive to community needs.

J. L. Fisher and Koch (1996) also noted that research literature rarely focuses on college presidents and that most of what exists examines transactional and transformational leadership. They are critical of much that has been published about presidential leadership in colleges claiming the works are often personal stories and experiences and that they are not based in theory or conducted using sound research methodologies.

Studies of Community College Leadership

In an effort to present models to improve methods for identifying and developing leaders for the future, Alfred et al. (1984) examined the structure of the community college and the climate of change present in a number of institutions.

Alfred (1984) described the changing external and internal environmental conditions facing community colleges as the basis for defining new leaders. He designed a "symbolic interaction model" (p. 8) to analyze potential leaders. The model "portrays leadership as a catalyst that adapts the internal organization to changing environmental

conditions, thereby producing congruence, or that retards change, thereby producing incongruence" (p.10). The effective leader must maximize institutional responsiveness to changing environmental conditions. Analysis of leadership as a function of a match between the individual, the institution, and the environment led Alfred to conclude that future effective leaders in community colleges will not be heroic, charismatic individuals. Rather, they will have successful administrative experience and will demonstrate both conceptual understanding and practical experiences in managing complex organizations.

Richardson (1984) cited changing demographics, declining resources, changing missions, aging staff, and changing technology as forces that future leaders will need to address. Richardson adapted the eight characteristics of excellent corporations developed by Peters and Waterman to the community college. These characteristics emphasize timely problem solving, quality service, commitment to institutional values, clear mission, involvement of all employees, and support at all levels of the institution.

Elsner (1984) discussed the relationship between leadership and change. Elsner stated that leadership turns on the way in which change is managed. Claiming that little has been done to prepare leaders for the twenty-first century, Elsner called for both local and national centers to study community college leadership and to train future leaders.

Smith (1984) examined the role of the community college leader in a changing community. He concluded that many routine roles--such as board and community relations, academic and institutional leadership, planning and budgeting, and, most important, communication with students and other public constituencies--would remain important. However, he described a critical new role, the societal visionary. In this role presidents must develop a vision of what tomorrow will bring, and a plan and set of goals

to best prepare for it. In this dimension, leadership involves analysis and interpretation of a massive, ever changing database to develop a sensible point of view about the benefits that can be derived from redirection of resources within the institution.

Terry (1984) stressed the increasing role among constituents. "Tomorrow's community college leaders must be able to merge the local concerns of business and industry, citizen groups, elementary and secondary education, and political officials with the statewide interests of the legislative and executive branches of government" (p. 71).

Palmer (1984) reinforced the work of Smith and Terry. He said the president will be required "to study the implications of impending socioeconomic changes, determine institutional responses to these changes, and secure the commitment of the college community to implementation of these responses" (p. 122).

Bush and Ames (1984) stressed the importance of technology. Advances in technology and the impact of these advances on fiscal and human resources create additional stresses on developing new funding sources and on creating new processes for human resource development.

Major research of the 1980s and 1990s explored the role of the president and college leadership by focusing on perceptions of leaders, by surveying those individuals or groups of individuals perceived to be effective leaders, by testing particular leadership theories, or by analyzing the literature.

Vaughan (1986) analyzed and described what presidents and others believe is important in an effective presidency. Vaughan surveyed over 800 presidents of public two-year colleges asking them to identify the two top community college leaders in their state. Of the 75 presidents who emerged, 68 participated in a leadership survey and also

nominated top national leaders. Ten presidents emerged as national leaders. Vaughan also interviewed trustees, spouses, faculty members, administrators, and other national educational leaders. Vaughan concluded that the primary factor determining effective presidencies was leadership. The presidents ranked integrity, judgment, courage, and concern for others as the top personal attributes; they identified producing results, selecting qualified people, resolving conflicts, communicating effectively, and motivating others as necessary skills and abilities. The primary leadership roles of the president were identified as taking responsibility for establishing and interpreting the mission of the college, for defining the community college mission, and for assuming the responsibility for seeing that the mission is carried out and understood by the college's many publics. Vaughan also stressed the role of the president as an educational leader and as the person responsible for setting the campus environment or mood. The president is also required to be an external leader who works with state legislators, business leaders, special interest groups, other educational institutions, local politicians, and other groups.

J. L. Fisher, Tack, and Wheeler (1988) asked 28 private foundation administrators, 35 higher education scholars and 400 randomly selected presidents of two- and four- year public and private institutions to identify the five most effective college presidents in the nation using their own definitions of an effective president. Out of a possible 3,300 presidents, the respondents identified 412. These 412 effective presidents and a random sample of the 3,300 not named as effective were asked to complete a 40-item questionnaire, the Fisher/Tack Effective Leadership Inventory. The Inventory focused on defining effectiveness in terms of characteristics and styles using five factors: management style, human relations, image, social reference, and confidence.

Analysis by each of the five factors revealed a significant difference between the responses of effective and representative presidents on the confidence factor but not on the other four. Analysis of items within the factors revealed no significant difference between the two groups on any items in the human relations or image factors. However, there were significant differences on items within the factors related to management style and social reference. The effective presidents were found to be less collegial and more distant; to be more inclined to rely on respect than affiliation, to be more inclined to take risks; to be more committed to an ideal or a vision than to an institution, to believe more strongly in the concept of merit pay; to work longer hours, and to be more supportive of organizational flexibility than rigidity.

The researchers conducted interviews with 18 of the most frequently nominated presidents. Those interviewed represented all four sectors: two- and four-year, public and private institutions. Analysis of the interviews identified three personal values critical to their philosophy. They were completely committed to what they do, expressing a strong belief in the value of higher education; they genuinely respected others; and they believed in themselves and others. The presidents displayed the following abilities and skills. They were intelligent and astute. They generated unlimited ideas about how to improve higher education, and they had a deep understanding of their own institutions. They did not take things personally; they had an intuitive ability to analyze, and they recognized opportunities and seized them. The researchers indicated that their analysis of the presidents' leadership styles generally supported previous studies. Effective presidents are action oriented; they accept authority and responsibility in governance; they work long hours; and they see the lighter side of things. Their human relations skills reveal

they are warm, outgoing people; they maintain self-control; they use power with finesse; and they are visible but share the credit. The philosophical nature of these leaders reveals that they are dreamers, but they have a vision, and they are reflective. They think carefully, use information, and integrate knowledge of data into their planning.

Roueche et al. (1988) conducted a study to identify the best transformational community college presidents and to describe what those leaders do and how those affected react to those behaviors. Their study was designed to determine whether transformational presidents in community colleges behave similarly or dissimilarly from peers when influencing and empowering others. Based on their study of modern theory, they believe that effective leadership can be learned, and their goal was to develop a set of behavioral attributes common to transformational leaders (Roueche et al., 1989).

The first stage of their study was designed to identify those leaders who have demonstrated transformational leadership qualities. They defined transformational leadership as "the ability to influence, shape, and embed values, attitudes, beliefs, and behaviors consistent with increased staff and faculty commitment to the unique mission of the community college" (Roueche et al., 1989, p. 12). They asked over 950 chancellors, presidents, and state directors of community colleges to nominate up to five individuals from their state and/or region that they believed exemplified this definition. They then studied how this group performed and how they empowered others to perform.

The 296 leaders who emerged were asked to write about their educational leadership philosophy, to provide examples, and to complete a three-page questionnaire. These leaders were also asked to nominate one or two exceptional community college CEO's in the nation (Baker, Roueche & Rose, 1988). This second process resulted in a

group of 50 outstanding CEO's, whom the researchers called "blue chippers" (1989, p.12). Baker et al. then studied this group in depth using interviews, evaluations, and survey instruments to document the characteristics, values, expectations, behaviors, and strategies of these leaders.

Roueche et al. (1989) developed five themes common among these transformational leaders: influence through teamwork and shared decision-making, people orientation, motivation, strong personal values, and vision of what can be.

Hammons and Keller (1990) reviewed leadership literature to identify possible attributes and then conducted a national study to identify the competencies and personal characteristics needed by community college chief executive officers of the future. Hammons and Keller developed a list of 62 competencies derived from a comprehensive review of the literature on community college leaders, from selected literature on four-year institutional leaders, and from selected literature on business sector leaders. The 62 competencies were organized into three clusters: leadership skills, group related skills, and personal characteristics. Using the Delphi method, Hammons and Keller surveyed a stratified, random group of 27 community college presidents. This group was asked to rate and, if needed, expand the list. The three-round process resulted in 43 competencies: 18 leadership skills, 5 group related skills, and 20 personal characteristics:

- Leadership skills (18): delegation; personnel selection; decision-making; interpersonal skills; knowledge of and commitment to mission; leadership; planning; visionary; organizing; information processing; public relations; professionalism; finance/budgeting; performance appraisal; analysis; controlling; peer network; scholarly writing.

- Group Related skills (5): motivation; use of power; entrepreneurship; integrating; conflict resolution.

- Personal Characteristics (20): judgment; commitment; integrity; communication; flexibility; positive attitude; energy; wellness; sense of responsibility; persistence; risk taking; emotional balance/control; time management; sense of humor; research; creativity/stability; empathy; introspection; patience; charisma. (pp. 37- 39)

Hammons and Keller (1990) found that current community college leaders agreed on the competencies needed for the future and recommended that the criteria be used as selection criteria in future presidential searches.

Amey and Twombly (1992) conducted a meta-analysis of the literature on community college leadership from the early 1900s to the present. Their purpose was to analyze the discourse of the literature to "(1) identify the images and rhetoric of leadership in junior/community colleges; (2) observe the sociohistorical and organizational context of these images; and (3) examine the effect of images and rhetoric on leadership behavior" (p. 126). Amey and Twombly reported two major findings. First, the discourse reinforces the ideology of the community college, particularly the concepts of constant change and of democratic ideals concerning the community college's role in society. Second, the discourse reinforces the image of the powerful autocratic leader and the ideology of a small group of white male scholars and practitioners. The particular image of leadership that emerges is that of the great man. Amey and Twombly concluded that the effect of this writing has been to exclude those who do not fit the symbolic image created by this group of white male authors. They pointed out that only four of Roueche's blue chippers were women and that Vaughan's chapter on women presidents focuses on problems women have in becoming presidents rather than on the leadership they offer.

J. L. Fisher and Koch (1996) examined leadership theory and current empirical evidence to develop principles of effective presidential leadership that apply to particular aspects of the college presidency.

> More than anything else, the problems of higher education involve a crisis in higher education leadership. Presidents have failed to lead, both because they do not understand what presidential leadership entails, and because their governing boards have not made it possible for them to lead. (p. 330)

They believe that effective leadership concerns accountability and that in many institutions presidential authority has been reduced or eliminated, often by boards that misplace authority in the hands of groups such as faculty, students, or alumni who cannot be held accountable for the decisions they make (p. 13).

Their review of the literature led J. L. Fisher and Koch to conclude that the theory of presidential leadership centers on the concepts of transactional and transformational leadership. They clearly endorsed the transformational model of leadership. They defined leadership as "the ability of A to get B to do something that B might otherwise not have done" (p. 21). Based on the topology developed by French and Raven, J. L. Fisher and Koch identified the most important forms of presidential leadership in a college or university (in ascending order of importance):

> Coercive, which is the threat or use of punishment by the president;
> Reward, which involves the ability of the president to reward and provide incentives;
> Legitimate, which is the importance of presidential position and which must be provided by the institution's governing board;
> Expert, which is based on the real or perceived knowledge of the president; and
> Referent, or charisma, which is based either upon a feeling of trust and oneness with the president, or a desire for such a feeling, and which should result in the development of a significant public presence. (p. xii)

J. L. Fisher and Koch claimed that although they encourage friendly, interactive relationships in college communities, collegial leadership is not possible. They said, "The president has to create a platform from which to lead the institution effectively" (p. 4). The authors supported the conclusions of J. L. Fisher et al. (1988) and discussed how

effective presidents should interact with various constituencies and how they should carry out specific tasks. They concluded the following:

> The most important form of presidential power is the president's own charismatic power. . . . A charismatic individual usually is capable of taking over a crowd by means of the power of his or her thoughts, his or her expertise or performance, and his or her carefully established public presence. (p. 332)

Campbell and Leverty (1997) sought to identify the attributes of a 21st century community college leader. They enlisted a group of 14 experts to construct a work profile for this leader. The group represented a variety of community colleges and included trustees, presidents, chief instructional officers, business officers, and faculty. Using the Delphi method, the group further refined the profile. The group used the attributes described in the Occupational Personality Questionnaire originally developed in 1984 in the United Kingdom by Saville and Holdsworth, Ltd., as the basis for developing the work profile.

The 21st century leadership work profile included the following attributes as essential: utilizing data/logic, critical evaluation of ideas, and the ability to engage in forward planning. Working in a nontraditional environment was considered important. Other relevant attributes in the relationships with people domain included being socially confident, enjoying negotiating and changing opinions of others, being in control and able to direct and take charge, using democratic strategies, caring about others, and enjoying affiliation with others. Other relevant attributes in the thinking domain include being able to analyze the thoughts and behaviors of others, being conscientious about details, being intellectually curious and engaging in theoretical thinking, and being creative and innovative. In the feelings and emotions domain, relevant attributes include

being ambitious and oriented toward achievement, being calm and relaxed and free from anxiety, being optimistic, and exhibiting emotional control (Institute, 2000).

Wen (1999) surveyed the presidents and CEO's of the nation's 1,271 community colleges to determine their self-perceived leadership styles. The results, based on responses from 176 presidents, showed no significant relationship between leadership style and personal characteristics such as number of years at present position, total years of experience, and influence on organizational culture. Wen's results indicated that nearly 80% of presidents were male, that they had served as administrators for about 21 years, and that they had been in their present position an average of 8 years. He also found no significant relationship between their styles and institutional characteristics such as single or multi-campus, number of faculty, and geographical setting. Wen used the Leadership Effectiveness Adaptability Description Self instrument. His results indicated that most presidents use the Selling style (50.3%) followed by Participating (35.6%). Only 1.2% used the Telling style, and none reported using the Delegating style. Some (12.9%) did report using multiple styles with an average of 1.5 secondary styles. Style adaptability, the ability to vary style appropriately to the situation, was also measured. The majority (76.3%) of the presidents were Moderate in their ability to adapt. Only 3.7% scored in the High range.

Hood, Miller, and Pope (1999) surveyed 96 community colleges presidents. The presidents identified the roles of communicator, innovator, and facilitator as most important to their positions. They identified institutional vision and revitalization as the most important dimensions of their leadership.

Although they used a variety of approaches and research methods, all of these researchers, Alfred et al. (1984), Vaughan (1986), J. L. Fisher et al. (1988), Roueche et al. (1988), Hammons and Keller (1990), Amey and Twombly (1992), J. L. Fisher and Koch (1996), Campbell and Leverty (1997), Wen (1999), and Hood et al. (1999) relied on feedback from contemporary leaders, views of leadership experts, particular leadership theory, and/or a review of the literature to select subjects for study or to define qualities of leaders.

Leadership Teams

A major theme in the literature on future leaders and 21st century organizations concerns the issues of teamwork and of empowering employees. The decentralization of leadership authority and the facilitation of individual and team learning are needed in the change process (Lorenzo & Zajac, 1996). Freed and Klugman (1997) stressed the importance of teams and team work as well as empowering all levels of employees to achieve quality principles, and Schein (1992) stressed the need to share and manage jointly to overcome the anxieties associated with change. Wellins, Byham, and Wilson (1991) researched teams and teamwork in organizations. They surveyed over 500 companies that used self-directed teams, conducted further research in 28 organizations, reviewed the literature, and drew on their own expertise in the fields of cultural change, organizational design, and training. They described the traditional organization as a layered/individual structure in which jobs are narrowly defined as single-tasked. In contrast, an empowered team organization has a flat team structure and jobs are designed to be whole process and multiple-tasked. In a traditional organization, management's role is to direct and control. Leadership is top-down and information flow is controlled and limited. In contrast, in an empowered team organization, the management's role is to

coach and facilitate; leadership is shared with the team; and the information flow is open and shared. In the traditional organization, rewards are made to individuals and may be based on seniority. Managers determine the job process; they plan, control, and determine how to improve processes. Empowered teams plan, control, and improve job processes in team organizations.

Bensimon and Neumann (1993) studied leadership teams in 15 institutions of higher education. They conducted 70 interviews of presidents and other team members at a group of diverse institutions. The intent of the study was to explore models of teamwork in higher education, taking into account the leadership orientations of presidents and their executive officers. Their interest was to examine how presidents and their designated team members work together; how team members perceive the quality of their working relationships; how presidents select, shape, and maintain particularly effective teams; and how teams address conflict and diversity of orientation among team members.

Their study indicated that the functions of presidential teams are a direct result of the president's personal leadership philosophy. Bensimon and Neumann (1993) described three functions of presidential teams. Utilitarian functions are task related and their purpose is to help the president maintain control over institutional functions. Primary activities include delivering information, coordinating and planning, and making decisions. Expressive functions are integrative and associative and their purpose is to help reinforce a sense of groupness or connectedness among individuals involved in a joint venture. Primary activities include providing mutual support and counsel to the president. Cognitive functions are intellective and dialogical and their purpose is to

enlarge the span of intelligence of individual team members, enabling the group to behave as a creative system as well as a corrective system. Primary activities include viewing problems from multiple perspectives, questioning, challenging, arguing, and monitoring. "Real" teams (p. 44) are complex and serve all three functions. "Illusory" (p. 45) teams are only partially utilized and generally lack both cognitive and expressive domains. Presidents whose personal leadership philosophy is individualistic and functionalist develop teams that are passive or inert and that function primarily in the utilitarian mode. A president whose personal leadership philosophy is dependent upon shared, interactive processes is more likely to develop a team that employs all three functions and that is active and creative (p. 144).

Knudson (1997) modified Bensimon and Neumann's interview protocols to study team leadership in community colleges. She studied presidential leadership teams in three medium-sized midwestern community colleges. Knudson found that all three presidents used multiple cognitive frames of reference. The presidents placed the greatest value on the domain of cognitive team functions while team members placed the greatest value on the domain of expressive functions. The teams were all functionally complex and exhibited all five of the core cognitive roles and three of the supporting cognitive roles described by Bensimon and Neumann. Knudson concluded that all three teams were complex, "real" teams, although each lacked one or more elements of effectiveness.

Napier et al. (1998) claimed that recent change initiatives such as total quality management have resulted in small incremental changes or worse because of the failure of leadership. Their research led them to conclude that two elements are critical to implementing strategic change successfully. These elements are a committed partnership

among executive leaders and a focus on the human dimensions of change. Napier et al. described the need for an executive leadership team that develops a synergistic relationship. The team must be a committed partnership among executive leaders. Leaders must be committed to team learning, to sharing information widely, and to solving difficult problems collaboratively. They must learn and use "change skills" and must build the capacity for team leadership throughout the institution.

Continuous Quality Improvement Leadership

Although almost every study of CQI implementation cites leadership and commitment of top leaders as major criteria for success, very few studies have examined leaders in CQI institutions. Brigham and Carusone (1996) found very little literature on CQI leadership in higher education.

Bensimon et al. (1989) observed that presidents "tend to accept a traditional and directive view" (p. iv) of their leadership. Few emphasized two-way communication, social exchange, or mutual influence. Gratton (1993), however, contended that since continuous learning is the basis for continuous improvement, concepts of leadership must be viewed differently. Power must be based on personal competence and on working in partnership with others and must be learned and practiced throughout the organization.

Gratton (1993) connected TQM leadership with Peter Senge's learning organization. Gratton stated that Deming's fundamental views about continuous improvement have often been simplified and reduced to demonstrable outcomes such as improved efficiency or making more money (p. 98). She argued that Deming's principles require leaders to change processes, relationships, and cause and effect systems and to develop a vision and desired outcomes. A Deming organization must be committed to continuous training, education, and self-improvement. Gratton said that Senge offers an

effective design for creating and sustaining an environment for learning. She argued that the assumption that learning is at the heart of continuous improvement and that learning creates the future dramatically changes prevailing beliefs about leadership in community colleges. "Leadership is learned and earned, not assumed. Its power becomes 'power-with' (working in partnership with others) and 'power-within' (personal competence)" (p. 100).

Several theorists and researchers have sought to define leadership for continuous quality improvement by placing it in either the transformational or the transactional model. J. L. Fisher and Koch (1996), who are skeptical of CQI, endorsed the transformational model in CQI. They stressed the lack of influence possible through the transactional model and the individual accountability and influence possible through the transformational model. The work of J. L. Fisher et al. (1988) also criticized total quality management processes. They summarized TQM as a "process-oriented, egalitarian approach to increasing productivity, decreasing costs, and improving quality" (p. 25). According to J. L. Fisher et al. (1988), the emphasis on teamwork, sharing responsibility, and seeking better ways to do things has led to excessive use of resources and time with minimal success. Instead, they endorsed the transformational leader as president, a leader who "is a strong, caring action-oriented visionary" who is "more willing to take risks than the usual president" (p. 57).

Bensimon et al. (1989) suggested that studies should consider that the debate about transformational versus transactional may not be purely an either/or choice and that both perspectives may be useful, but in a more complex configuration. Freed and Klugman (1997) encouraged a more collegial leadership style (transactional) in quality

organizations. They emphasized collaboration, participation, and interaction at all levels. However, they also described quality leaders as visionary decision makers (transformational) who based decisions on data rather than intuition. Rather than relying on charisma though, these leaders developed trust and mutual respect through shared leadership, communication, and decision-making based on data and assessments.

According to Gratton (1993), individuals, rather than a top leader such as the president, are assumed to be agents of transformation. Continuous Quality Improvement organizations must cultivate a systems view and must understand the inner-connectedness of all processes.

Studies of Leadership and Continuous Quality Improvement

Believing that leadership is the foundation of the change process, leaders at Virginia Institute of Technology began implementing TQM by forming a task force on university leadership (Leffel et al., 1991) whose goal was to create a vision for quality management. The task force was comprised of faculty with expertise in organizational development. In addition, the Office of Research and Planning and other university resources provided support and data. An administrative advisory committee was formed to periodically review the accomplishments of the task force. After reviewing the literature, the task force adopted John Gardner's model. The task force identified these leadership tasks: envisioning goals, affirming values, motivating, managing, achieving workable unity, explaining, serving as a symbol, representing the group, and renewing. In addition, the task force gathered data from both leaders and followers within the institution by conducting 78 interviews and organizing 36 focus groups. The task force concluded that leadership must be a value at all levels of the organization, that followers must view the management process positively, that strengthening cultural values is a

catalyst for change, that the leader must demonstrate daily the desired behaviors and values, and that a clear vision and shared values produce a sense of community.

The study also concluded that followers at all levels of the organization are able to identify the ideal leader's attributes. Attributes include a sense of vision, personal integrity, ability to nurture, decisiveness, intervention, active listening, assertiveness, delegation, advocacy, situational leadership, appraisal and feedback, mediation, and political insight. The profile of the ideal leader also included knowing how organizations work and having a repertoire of skills to use as appropriate. Leffel et al. (1991) concluded that these attributes are consistent with those reported by other leadership researchers. Leffel et al. (1991) also concluded that the majority of administrators were not prepared to be leaders and that professional development was needed.

As a result of the task force findings and other research at Virginia Tech, Leffel et al. (1991) identified seven primary responsibilities for leaders involved in a TQM effort.

> ·define where we are and what we look like;
> ·define where we are going and how we will move along the road of continual improvement, and disseminate this vision broadly;
> ·project and demonstrate by example university values that emphasize quality;
> ·inspire, motivate, and value all personnel in orchestrating concerted action along the road to TQM;
> ·remove organizational barriers between institutional units and levels of the hierarchy that impede cross-functional teams;
> ·incorporate learning, problem solving, and risk taking as strong elements of an institutional culture that seeks TQM;
> ·celebrate successes. (p. 64)

Although Dever (1997) claimed that Peter Senge's learning organization is particularly suited to higher education, he recognized that the model rejects the traditional view of leaders. Dever aligned Senge's description of the leader as designer, steward, and teacher with what Birnbaum (1988) saw as the limits inherent in the power and influence

of educational administrators. This view conflicts with other studies of higher education leadership, such as J. L. Fisher and Koch (1996), that advance more activist notions of what a college or university president can accomplish. Dever argued that the more restrained mode of leadership advanced by Senge is not a necessary corollary to successful implementation of models such as the learning organization or continuous quality improvement. Dever compared Senge's descriptors to the four frames of Bolman and Deal (1991) and aligned the designer with the structural frame, the steward with the symbolic frame, and the teacher with the human resource frame. The political frame was missing from Senge's model. Deal claimed that Senge rejected the traditional heroic or strong leader because that image reinforces the followers' own sense of powerlessness. However, Dever argued that such leadership could sustain and augment the followers' power. Thus, he argued for the strong attributes of the transformational as well as the transactional leader. "Room needs to be made in the learning organization model to accommodate the power of the strong individual leader—be it heroically transformational (admittedly rare) or politically transactional" (p. 61).

Schoening (1994) described his method of instituting change at Independence Community College in 1992. He worked with faculty, staff, and mid-level administrators to develop a new mission statement and implementation strategies. Using the new mission, the president's cabinet and others identified administrative traits or characteristics that were needed to carry out the college mission and the strategies. They reviewed supervisor leadership styles and chose participative leadership as described by Wellins et al. (1991). The college developed a team leadership model that called for an administrator who could foresee, value, influence, and promote change; facilitate,

support, and coach self-directed teams; expand team capabilities through effective communication, creativeness, and performance-based team identity; utilize strategic planning to make the most of team differences; and use continuous performance personnel practices. The team is consistently focused on foreseeing, influencing and evolving change; performance based leadership; strategic planning; and continuous performance improvement. The administrative in-service program and evaluation process focuses on those same institutional philosophies.

Walters (1995) described a highly collaborative style of leadership that emphasizes interdependence and shared responsibility among a wide variety of organizations and groups. The model is not one of "we are the leader and will help you find the way" but rather one of "we're all in it together, and must jointly find the way" (p. 7).

Studies of team leadership support the concepts of leadership described by Rost (1990), Senge (1990), and others who are concerned about leadership for the future. Concepts of team leadership are also consistent with the theories of quality improvement. The research also indicated that the functioning of teams is a direct result of the president's personal leadership.

Summary of Review of Literature

The principles of continuous quality improvement have been shown to be appropriate to educational institutions, and in the last 10 years many higher education institutions have begun adopting these principles to effect organizational change. However, the research also indicates that development and successful implementation of CQI have been slow in education. No institution was able to score high enough on the

rigorous criteria for the Malcolm Baldrige Award to receive the award in its first two years of availability. However, three institutions received the award for 2001 (Kosko, 2001), after investing years in the process. The research indicates that commitment of top leadership and effective leadership are critical to the success of implementation of total quality management. Studies of CQI institutions emphasize shared leadership, personal competence, visionary qualities, participation and interaction while dismissing qualities such as assumed power and charisma (Dever, 1997; Freed & Klugman, 1997; Gratton, 1993; Leffel et al., 1991; Walters, 1995).

CHAPTER 3
RESEARCH METHODOLOGY

This chapter explains the research methodology used in this study. The research purpose, problem, and design are described; the research instruments and research sample are explained. The data collection methods are explained followed by the methodology used for data analysis.

Purpose of the Study

The purpose of this study was to develop a theoretical construct of effective leadership in a community college that has adopted or wants to adopt the principles of continuous quality improvement. According to Gall, Borg, and Gall (1996), a theoretical construct is developed by explaining a set of observed phenomena. This study was designed to gather data to explain the leadership of presidents and senior team members of institutions that have demonstrated successful implementation of Continuous Quality Improvement processes. The study presents an analysis of leadership in colleges that have demonstrated success as measured by the Baldrige Quality Award Education Criteria. Specifically, this study determined the level of implementation of the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence in member institutions of the Continuous Quality Improvement Network. To develop the theoretical model, leadership styles, team types, personality traits, situational variables, and intervening variables were explored. Both quantitative and qualitative inquiry

methods were used to determine the leadership and team profiles of the presidents and senior team members of those institutions that scored highest on the Baldrige Quality Award Index Rating. The Occupational Personality Questionnaire (OPQ) was used to determine the critical traits, team types, and leadership styles of the presidents and their senior team members. Questionnaires and institutional reports and documents were used to gather information about the situational and intervening variables that are associated with successful implementation of CQI. Semi-structured interviews were conducted to further explore the practices of the CEO's and to further understand the organizational structure. A conceptual model for effective leadership in a community college that has adopted or wants to adopt the principles of continuous quality improvement was developed. To determine how the key leaders in the colleges studied contributed to the successful implementation of CQI, the following major research questions were addressed:

- Is there a difference in the situational variables in colleges with similar levels of implementation of CQI?
- Is there a difference in the personality traits of members of the senior leadership teams in colleges with similar levels of implementation of CQI?
- Is there a difference in the leadership styles of members of the senior leadership teams in colleges with similar levels of implementation of CQI?
- Is there a difference in the team types of members of the senior leadership teams in colleges with similar levels of implementation of CQI?
- Is there a difference in the intervening variables affecting CQI implementation in colleges with similar levels of implementation of CQI?

These questions constitute the study's propositions, the phenomena to be examined within the scope of the study (Yin, 1994). For the purposes of this study, situational variables are those contextual and organizational conditions that exist within a

leadership setting. Researchers (Entin, 1994; Hammons, 1994; Horine & Hailey, 1995) have identified the motivation for adopting CQI, the organizational structure, the culture of the institution, time for implementation, and personal factors of the leaders as important situational factors in the implementation of CQI. Personality attributes to be explored are grouped into three domains: relationships with people, thinking style, and feelings and emotions. OPQ data also yielded preferred leadership styles of the presidents and other senior leaders. The study explored each leader's preferences for five leadership scales (Bass, 1990) and each leader's ability to adapt style use depending on the circumstances. OPQ data were also used to determine preferred team types based on Meredith Belbin's eight team roles for optimum performance, for presidents and senior team members. Intervening variables are those variables that mediate the effects of leadership behavior on end-result criteria of leadership success (Yukl, 2001). In implementation of CQI, intervening variables are likely to include presidential commitment and involvement, follower commitment and involvement, training, management of change, and reaction to external events such as legislative or economic changes (Hammons, 1994; Horine & Hailey, 1995; Van Allen, 1994).

Research Problem

Leadership research has been characterized as being too narrowly focused and as providing simple explanations (Yukl, 2001). To determine the characteristics of effective leaders, researchers have studied national leaders as identified by other leaders, analyzed leadership theory, or surveyed leaders based on a particular leadership approach such as transformational or transactional leadership. Research has not been conducted by

selecting leaders according to institutional outcomes or assessments such as successful implementation of CQI principles.

Research indicates that current knowledge of leadership styles is not sufficient to meet the demands of today's management innovations such as TQM (Haire, 1997; Jameson & Soule, 1991). In addition, the successful implementation of CQI has been difficult for many institutions. Seymour (1994) reported that although 7 in 10 educational institutions surveyed were using principles of total quality management, only 1 in 10 were using those principles extensively. Researchers indicate that implementation takes time and commitment. Juran traced the disappointing results to "limitations of leadership by upper managers" (1995, p. 586). Proponents of CQI have emphasized the central importance of leadership in a CQI organization (Freed, et al., 1994; Leffel et al., 1991; Norton, 1994; Seymour 1992; Walton, 1986) and have identified general characteristics important to CQI leadership. These include shared leadership, personal competence, visionary qualities, participation and interaction (Dever, 1997; Freed & Klugman, 1997; Gratton, 1993; Leffel et al., 1991; Walters, 1995). However, "very little empirical evidence exists to help understand how leadership styles best complement and assure success of CQI implementation" (Haire, 1997, p. 2).

According to Bass,

> Some of the variance in who emerges as a leader and who is successful and effective is due to traits of consequence in the situation, some is due to situational effects, and some is due to the interaction of traits and situation. (1990, p. 87)

Bass indicated that more qualitative research is needed to address the complexities of organizations and their leadership. Yukl (2001) suggested that the various lines of research are gradually converging and that the various approaches should be viewed as

part of a larger network of interacting variables. Yukl proposed that leadership characteristics and behaviors are both the independent and dependent variables and that leaders affect and are affected by other variables including the institution's success criteria.

Research Design

This study examined the concept of effective leadership within institutions that have demonstrated success in implementing and using continuous quality improvement. The first phase of the study determined the degree of implementation of CQI in the member institutions of the Continuous Quality Improvement Network using a survey research design, a method common to investigation of educational issues (Gall et al., 1996). In this study, the success of the institution was determined by using the Institutional Self-Assessment (Appendix A), which measured an institution's level of implementation of the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence. To determine situational variables present in each college, an institutional background questionnaire (Appendix A) was included with the self-assessment survey. The background survey requested information about the implementation of CQI at the institution as well as data about the college, the president, and senior team members. Situational variables included the motivation for adopting CQI, time for implementation, organizational factors and culture, and personal factors of the leaders.

The second phase was designed to investigate leadership in colleges with high levels of CQI implementation. This part used both quantitative and qualitative research methods to collect and analyze data from the colleges that scored highest on the

Institutional Self-Assessment. According to Yin (1994), the case study method is used when contextual conditions need to be studied and when "the boundaries between phenomenon and context" (p. 13) are not clearly evident. This study used an embedded, multiple-case design (Yin, 1994). An embedded design is used when a case involves more than one unit of analysis; a multiple-case design is used when there is an interest in determining replication of phenomena. This study investigated two colleges and their leaders, each treated as a separate case. The evidence for each case was gathered and analyzed independently. Results for each case were written individually. Then a cross-case analysis was written. The conclusions from the cross-case analysis were used to develop the theoretical construct.

The theoretical framework for leadership developed in this study defined the leadership attributes consistent with successful implementation of CQI within specified contextual conditions. The colleges with the highest scores on the Institutional Self-Assessment were selected as the multiple cases for study. The units of analysis in each case were the president and the leadership team and certain situational and intervening factors. Factors investigated were those cited in the literature as affecting implementation: organizational factors and culture, time for implementation, motivation for adopting CQI, personal factors of leaders, leadership commitment, training, campus wide involvement and commitment, management of change, and external events (Brigham, 1994b; Entin, 1994; Ewell, 1993; Hammons, 1994: Horine & Hailey, 1995; Marchese, 1993; Peterson, 1993; Van Allen, 1994).

According to Yin (1994), a qualitative research design can be assessed using the logical tests commonly applied to quantitative research designs. Construct validity can be

increased using three tactics. The first is the use of multiple sources of evidence during data collection. This study used surveys and questionnaires, document analysis, and semi-structured interviews. The second is to establish a chain linking the pieces of evidence; this occurred during collection and analysis of the data and is reflected in the reported results. The third is to have the key informants review the report to verify the accuracy of their responses. The respondents were sent their results for review and comment. The presidents reviewed transcripts of their interviews.

Threats to internal validity in qualitative analysis are most likely to occur when inferences are made (Yin, 1994). Making correct inferences was strengthened through careful analysis of interview and documentary evidence, attention to alternate possible explanations, and tightening of potential gaps in the chain of evidence collected. In addition, Dr. Dale Campbell, a qualified SHL Test User, reviewed the discussion related to the results of the OPQ.

External validity, the generalizing of the results, is threatened if the results of the case study are assumed to apply to a larger population (Yin, 1994). Statistical generalization is not suitable to case studies. Rather, case studies rely on analytical generalization, in which a particular set of results may be generalized to a broader theory.

The Occupational Personality Questionnaire was administered to the president and members of the senior leadership team at each of the colleges that rated highest on the Baldrige Quality Award Index Rating. Copies of college documents and reports were also collected from these colleges. Information studied included the organizational chart, governance structure, committee structure, committee minutes and agendas; the strategic

plan, including statements of mission and philosophy; and performance or assessment reports.

Information was gathered regarding existing situational variables at each of the highest rated colleges. Situational variables are those contextual and organizational conditions that exist within a leadership setting (Yukl, 1994). Researchers have identified the motivation for adopting CQI, the time for implementation, the organizational structure of the institution, the organizational culture, and the personal characteristics of the leaders as important to successful implementation.

Information was gathered regarding intervening variables related to implementation of CQI. Information gathered from the documents and questionnaires was based on the variables cited in the literature as affecting the successful implementation of CQI (Brigham, 1994b; Entin, 1994; Ewell, 1993; Hammons, 1994: Horine & Hailey, 1995; Marchese, 1993; Peterson, 1993; Van Allen, 1994). Intervening variables included senior leadership commitment to the principles of CQI and involvement in the process; campus wide training and participation in CQI development activities; and management of change. Semi-structured interviews were conducted to clarify and add to information collected from documents and questionnaires (Appendix D).

Research Instruments

The success criterion was defined as the level of implementation of the Baldrige Award Criteria. The Baldrige Quality Award Index rating of each college was determined using a self-assessment questionnaire. The survey questions addressed the 18 subcategories within the seven categories contained in the 1998 Malcolm Baldrige

Quality Award Education Criteria for Performance Excellence. The self-assessment was conducted using a five point Likert-type scale: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree nor Disagree, (4) Agree (5) Strongly Agree. The responses were then entered into the Baldrige Quality Award Index Rating Sheet, which weighted the responses for each of the 18 subcategories according to the Baldrige Education Criteria point system. Cornesky, McCool, Byrnes, and Weber (1992) suggested that institutions use the Baldrige Quality Award Index Rating, based on the Baldrige Award Criteria and point system, to obtain a baseline from which to begin a CQI program. Paris (1996) modified the instrument, basing it on the 1995 Baldrige Education Criteria for Performance Excellence. The Paris survey was developed in association with Dr. George A. Baker III, Joseph D. Moore Distinguished Professor of Community College Leadership and Director of the National Institute for Leadership and Institutional Effectiveness at North Carolina State University. Eight members of the Carolina Quality Consortium advisory board reviewed the instrument for content and face validity prior to a pilot test. Upon revision, this group concurred on the validity (Paris, 1996). The reliability factor of the instrument was greater than .85 as determined by Cronbach's Coefficient Alpha. Parallel split half reliability resulted in a reliability coefficient of .88 for odd numbered responses and .86 for even number responses. Total reliability was .93 using the Spearman-Brown formula of conversion (Paris, 1996). Paris used the instrument to determine institutions' current and expected future levels of implementation of Baldrige criteria. For this study, the Paris instrument was used with updates to reflect the 1998 Baldrige Education Criteria and point system. Copies of the self-assessment instrument and the response sheet are included in Appendix A.

The Background Information Sheet (Appendix A) was developed to gather information about the institution, members of the leadership team, and the reason(s) for adopting CQI. This information was used to provide a descriptive profile of all the institutions as well as to determine differences in situational variables.

The Occupational Personality Questionnaire (OPQ) was administered through the Institute of Higher Education at the University of Florida as part of the 21st Century Educational Profiles Project under the leadership of Dr. Dale F. Campbell, Professor and Director of the Institute of Higher Education. The OPQ was given to the presidents and senior leaders in the institutions that scored highest on the Institutional Self-Assessment. The OPQ measures 30 concepts in three "domains": relationships with people (9 concepts), thinking style (11 concepts), and feelings and emotions (10 concepts). Each concept model attribute is rated on a scale ranging from a low level of the attribute to a high level. (See Appendix C.) Support for personality scales as predictors of specific independent measures of job competency or performance has been demonstrated in several studies (Saville, Sik, Nyfield, Hackston, & MacIver, 1996). Baron (1996) concluded that instruments using numerous scales (including the 30 in the OPQ) do provide interpretable psychometric parameters. Internal consistency reliability for the OPQ items (N=441) ranged from .54 to .88 with a median of .75 as determined by Cronbach's Coefficient Alpha (Saville & Holdsworth, 1996). Saville and Holdsworth stated that a range of .50 to .80 is desirable for measuring broad personality traits provided that test-retest and alternate form reliabilities are adequate. The test-retest correlation coefficient for the 31 scales of the OPQ ranged from .69 to .94 with a median

of .84 on a sample (N=86) with a one-month interval between tests (Saville & Holdsworth, 1996).

A number of studies have been conducted to determine criterion and construct validity of the OPQ. For example, a study comparing OPQ results with supervisors' job performance evaluations of 269 senor managers indicated that aspects of personality are consistently related to job performance. All correlations were significant at the 5% level (p .05) (Saville & Holdsworth, 1996). Construct validity studies included correlation with the Jenkins Activity Survey Type A Scale (N=95), with the Sixteen Personality Factor Questionnaire (N=230), and with the Myers-Briggs Type Indicator (N=82), among others. Results suggested that the OPQ measures essentially what it intends to measure (Saville & Holdsworth, 1996).

The OPQ also determines an individual's preferred Leadership Styles—using the five described by Bass (1990): directive, consultative, delegative, participative, and negotiative. Since these styles are not necessarily mutually exclusive, the OPQ also measures an individual's adaptability, that is, the capacity to adopt different styles of behavior in different sets of circumstances.

The OPQ also determines an individual's preferred Team Types—based on Meredith Belbin's eight team roles for optimum performance: coordinator, shaper, innovator-plant, monitor-evaluator, resource investigator, completer, team worker, implementer (Belbin, 1981, 2000). A team role is a cluster of related characteristics; the OPQ expert system derives the team types from clusters of its 30 concepts. Dulewicz (1995) developed a correlation matrix for the eight team roles derived from the OPQ and from another personality questionnaire, the 16 Personality Factor Questionnaire.

Dulewicz found high proportions of significant intercorrelations. He also found significant correlations between the two questionnaires when relating the same team role from each. The one exception occurred where the two questionnaires differed in the kinds of scales used.

Information regarding situational and intervening variables was gathered through interviews and from institutional documents and reports. Documents included college catalogs, organizational charts, strategic plans, performance and assessment reports, and the colleges' websites. The governance structure, committee structure, and some job descriptions of each college were also examined.

The fourth resource used for data gathering was telephone interviews. The purpose of these interviews was to further explore the behaviors of the leaders, the CQI implementation process, and additional information on the intervening variables. A copy of the interview questions is included in Appendix D.

Population

The research design for this study required a purposeful sampling process (Gall et al., 1996). The population for the self-assessment based on the Baldrige Education Award Criteria and the Background Questionnaire consisted of the community colleges in the Continuous Quality Improvement Network (CQIN). The president, CQIN Institutional Representative, or other appropriate administrator at each participating college completed the self-assessment questionnaire.

Development of the leadership model described in this study required a population of leaders who were committed to and have had success in continuous quality improvement. The membership of CQIN was selected for this study because of the

organization's commitment to the principles of continuous quality improvement. In addition, membership requires commitment from top leadership and evidence of that commitment in the organization. The Continuous Quality Improvement Network was formed "to assist member CEOs with active organizational transformation via out-of-box learning and sharing practices" (CQIN, 2001, Introduction, ¶1) and to develop workshops and other strategies to aid faculty, staff, and trustees in learning about CQI. It was formed in 1991 with 13 member institutions. Membership is currently 36 organizations, including colleges, districts, non-profit organizations, and corporate partners. The organization invites chief executive officers of community and technical colleges to apply if they are committed to organizational transformation and measurable, continuous improvement (CQIN, 2001, Application).

The results of the Institutional Self-Assessment were used to determine the Baldrige Quality Award Index rating for each of the colleges. The rating sheet provides a weighted score for each of the 18 subcategories within the seven categories contained in the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence as well as an overall Baldrige Quality Award Index Rating score. The weighting is the same as the weighting system used in the Baldrige Criteria. Data also included the range of scores and an overall mean score for all institutions in the study (Appendix E). The Baldrige Quality Award Index ratings are Category I, Not Yet Quality Focused; Category II, Commitment; Category III, Significant Progress; and Category IV, Quality Focused.

The study's population was further narrowed to the colleges that scored in Category IV, Quality Focused. The Occupational Personality Questionnaire was

administered to the presidents and senior leaders in those colleges. The total number of subjects was determined by the actual membership of the leadership teams in the colleges meeting the success criteria. The presidents participated in the semi-structured interviews.

Data Collection

Presidents of the community colleges in CQIN were contacted and were given a description of the purpose of the study. They were asked to commit their institutions to participate in the initial self-assessment and background questionnaire and to agree to participate in the follow up study if asked (Appendix A).

The self-assessment instrument was mailed to the CQIN representative or other official designated by the president. Respondents were asked to complete the self-assessment instrument and questionnaire and to return them in the enclosed self-addressed, stamped envelope.

Once this data was collected and analyzed, the top colleges were selected for further study. The OPQ was administered to the president and leadership team members identified in the questionnaire. Follow-up information and additional documentation were requested from the president or designee (Appendix B). Information was also obtained from each college's website. Additional documentation requested from institutions that were selected for further study included an organizational chart of the institution, a description of the governance structure, a list of college wide committees and their functions and membership, the college's strategic plan, and performance or assessment reports. The results of the OPQ were provided to the participants, and they were invited to respond with comments or questions (Appendix C).

The content of the follow up questions was finalized after the results of the previous data were obtained. A copy of the questions was mailed to each leader before the interview (Appendix D). The telephone interviews were structured to last about one hour. The interviews were taped and the interviewer took notes during the interview. The presidents were sent a copy of the interview summary and were given the opportunity to provide additional input and make corrections (Appendix D).

Data Analysis

Data from the Institutional Self-Assessment Response Sheet were analyzed. A table showing the frequency of responses for each of the 18 elements was created. For each numerical score (from 1 to 5) for each question, the frequency, percentage, and the mean were calculated. A Baldrige Quality Award Index Rating Sheet was created for each college. Raw scores were entered into the rating sheet. Scores were weighted according to the Baldrige Education Criteria point system. The weighted scores were totaled to determine the overall Baldrige Quality Award Index Rating for each college. The frequency of scores and mean scores were calculated for all of the participating colleges. Descriptive information obtained from the Background Information Sheet was also analyzed.

The colleges with the highest Baldrige Quality Award Index Rating scores were selected for further study. The Occupational Personality Questionnaire was administered to the leadership team members at each of these colleges. The OPQ Expert System is a computer program that analyzes the scores entered by the respondent (Saville & Holdsworth, 1996). The first set of data describes the respondent's Personality Profile. It groups responses into Relationships with People, Thinking Style, and Feelings and

Emotions. The raw scores are normed using the standard tens (sten). The sten is based on a transformation from the z-score and has a mean of 5.5 and a standard deviation of 2. Stens divide the score scale into 10 units. Each unit has a band width of half a standard deviation, except the highest unit (Sten 10) which extends from 2 standard deviations above the mean, and the lowest unit (Sten 1) which extends from 2 standard deviations below the mean (Saville & Holdsworth, 1996). The SHL Human Resource Management System produces a report describing each respondent's scores and a narrative report that describes the individual's attributes and that profiles the respondent by analyzing groups of attributes.

The OPQ also described the respondent's preferred leadership styles and team types. The SHL Human Resource Management System report provided a profile of each leader's likely use of these leadership styles: Directive, Consultative, Delegative, Participative, and Negotiative. The System provided a profile of each leader's likely use of these team types: Coordinator, Shaper, Innovator, Monitor-Evaluator, Resource Investigator, Completer, Team Worker, and Implementer. Profiles of all the leaders were analyzed and compared. Similarities, differences, and ranges of preferences and traits were described in the qualitative analysis.

Data from the follow up questionnaire, from the documents collected from each institution, and from the interviews were analyzed and recorded in a case study database for each institution. Interviews were conducted by phone. All interviews were taped and transcribed. In addition to the tapes, the interviewer took detailed notes during the interview. The OPQ profiles, interview information, and the information collected from the follow up questionnaire and from college documents were analyzed using the

constant comparative method (Gall et al., 1996; Merriam, 1998). First, data were broken into segments representing single pieces of information. The segments were then grouped into categories based on the study's five propositions. Finally, the categories were analyzed for patterns. A case report was written for each institution. The case reports were then compared and a cross-case analysis was developed. Using this process, a model was developed that described the leadership team, its members' traits, and its actions and interactions. The theoretical construct for effective leadership in a community college that has adopted or wants to adopt the principles of continuous quality improvement was constructed.

CHAPTER 4
RESULTS

This chapter includes a description of the research results and presents the analysis of the results. The results of the Institutional Self-Assessment are presented. The case studies for the two colleges selected are presented, and a cross-case analysis is developed.

Institutional Self-Assessment

The first phase of the study determined the degree of implementation of Continuous Quality Improvement in the member institutions of the Continuous Quality Improvement Network (CQIN) using a survey research design. "The Continuous Quality Improvement Network invites the Chief Executive Officers seriously committed to organizational transformation and measurable, continuous improvement to apply for membership" (CQIN, 2001, Application, ¶1). Applicants should be able to demonstrate commitment to the concepts of organizational learning and continuous improvement. At the time of this survey there were 26 two-year college members. Of these, three had interim presidents or were involved in searches for new presidents so were eliminated from the population. A fourth was involved in an internal study of its commitment to CQI and was eliminated. The remaining 22 institutions were sent the Institutional Self-Assessment, an 18-item survey based on the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence (Appendix A). Of the 22 institutions, 15

returned the survey, a response rate of 68%. Responses to the Baldrige survey items ranged from (1) strongly disagree to (5) strongly agree. (See Appendix E for frequency of scores for each item.) The numerical responses for each item for each college were entered into the Baldrige Quality Award Index Rating Sheet to determine the Quality Index for each college (See Appendix E for composite scores.) The rating sheet was used to weight each response according to the points awarded in the Baldrige system. Table 4-1 shows the overall weighted score for each college. Scores ranged from 59.2 to 87.2 on a 100-point scale. Of the 15 colleges, 1 college scored in Category I, 1 in Category II, 11 in Category III, and 2 in Category IV.

Table 4-1
Quality Index Rating for Participating Institutions

Overall Rating	Category
59.2	I
60.8	II
70.5	III
72.1	III
72.6	III
73.0	III
75.7	III
75.8	III
75.9	III
76.0	III
77.0	III
78.3	III
79.4	III
80.0	IV
87.2	IV

Quality Index Rating	Category	Description
0 – 59.9	I	Not yet quality focused
60 – 69.9	II	Commitment
70 – 79.9	III	Significant progress
80 – 100	IV	Quality focused

Participating colleges were asked to complete a questionnaire to provide additional institutional information at the time they responded to the Baldrige survey. (See Appendix A for Background Information Sheet.) Table 4-2 displays the relationship between years involved in implementing TQM, overall rating, and category.

Table 4-2
Years of Involvement in CQI and Quality Rating

Year Implemented	Category	Rating
1985	III	75.7
1989	III	73.0
1990	IV	87.2
1990	III	79.4
1991	IV	80.0
1991	III	78.3
1992	III	75.8
1992	III	76.0
1994	III	77.0
1997	III	72.1
1998	III	70.5
1998	III	75.9
1999	II	60.8
1999	I	59.2
2000	III	72.6

Overall, the data showed a positive trend between length of time an institution is involved in TQM and higher scores. Exceptions occurred at the high and low number of years. The college that most recently began implementation had a higher score than the schools involved for one to three years. The two colleges involved the longest scored toward the middle rather than the top of the range. However, one of those colleges had a CEO change in 1994, the other in 1997 and again in 1998. Three other colleges also had CEO changes.

Table 4-3 shows the results of matching scores with the time the current CEO has been involved in CQI at that institution. The relationship between rating category and

time of presidential involvement revealed an even stronger relationship than just time of college's involvement. The exception to both length of time and length of CEO leadership is the school that reported beginning CQI implementation most recently. There was a direct relationship between rating category and current CEO involvement; CEO's with the longest involvement led the institutions in Category IV.

Table 4-3
Current CEO Involvement and Quality Rating

Year Current CEO Became Involved	Category	Rating
1990	IV	87.2
1991	IV	80.0
1992	III	75.8
1993	III	79.4
1994	III	77.0
1994	III	73.0
1996	III	78.3
1997	III	72.1
1998	III	76.0
1998	III	75.9
1998	III	75.7
1998	III	70.5
1999	II	60.8
1999	I	59.2
2000	III	72.6

The questionnaire provided additional background information on key personnel. The characteristics of the CEO's are displayed in Table 4-4. Data for 14 of the 15 presidents are included; one president did not respond.

The presidential group was heavily represented by white males in their 50s. None of the presidents was less than 50 years old. The majority of CEO's (65%) had been at their institutions 10 years or fewer. These results are consistent with Wen's (1999) national data on community college CEO's regarding age, gender, and time in present position. The two presidents in the colleges that scored in Category I were in the majority

group of white males in their fifties. In contrast, at the time of this study, the Category IV presidents had served 11 and 22 years as president at their respective colleges, which was longer than the majority of the group and longer than the average 8 years reported by Wen.

Table 4-4
Personal Characteristics of Chief Executive Officers

Factor	No.	%
Age		
49 or less	0	
50-54	6	42.86
55-59	6	42.86
60 or more	2	14.28
Gender		
Male	10	71.43
Female	4	28.57
Race		
African-American	2	14.29
Caucasian	11	78.57
Hispanic	1	7.14
American Indian	0	
Asian-American	0	
Other	0	
Years at College		
0-5	4	28.57
6-10	5	35.72
11-15	1	7.14
16-20	0	
21-25	0	
26-30	3	21.43
31+	1	7.14

Demographic information was also gathered on senior team members at the colleges. See Table 4-5. This group represented a much broader age range than the presidents, and over 25% are under the age of 45. The group was nearly evenly split between males and females whereas 71% of the presidents were males. A larger percentage of the senior team leaders were Caucasian, 86% compared to 78% of the

presidents. Fewer team members (55%) than presidents (64%) had been at their current institutions 10 or fewer years. However, nearly 40% of the senior leaders had been at their current institution 5 or fewer years; 28% of the presidents fell in that range.

Table 4-5
Personal Characteristics of Administrative Team Members

Factor	No.	%
Age		
39 or less	9	10.22
40-44	14	15.91
45-49	18	20.46
50-54	30	34.09
55-59	9	10.23
60 or more	8	9.09
Gender		
Male	49	52.69
Female	44	47.31
Race		
African-American	6	6.45
Caucasian	80	86.02
Hispanic	6	6.45
American Indian	0	0
Asian	1	1.08
Other	0	
Years at College		
0-5	36	39.56
6-10	14	15.39
11-15	17	18.68
16-20	7	7.69
21-25	7	7.69
26-30	7	7.69
31+	3	3.30

Respondents were also asked to provide the primary reason for implementing TQM at their institutions. Results are shown in Table 4-6. None of the institutions identified a crisis or serious problem as the reason for adopting CQI. Reasons most often

cited included a desire to transform the institution, to become a learning college, to improve performance, to improve processes, and to respond to community needs.

The survey also indicated that in all of the institutions except one the person most responsible for implementing TQM on campus was the CEO.

Table 4-6
Reasons for Adopting CQI

Strategic vision to adopt quality approach as tool for transforming to learning college
New CEO; institutional transformation
President's interest; desire to use CQI for accreditation
Local business and industry requested CQI training; CEO and administrators identified quality as a critical strategic issue
Our vision is to become a best in class institution; to measure and improve our processes
To improve communication on campus
College always interested in assessment, using TQM, adopting CQI
Assess current condition; improve performance for accountability; the right thing to do.
To improve campus processes with measurable data/results as indicators
Emphasis and alignment with the college's focus on learning; documentation of improvement
My knowledge (CEO) of CQI from previous employment; I think it will help the quality of my institution.
School has a culture based on the philosophy and concepts of CQI; college is a student/stakeholder focused learning community
Remain competitive; improve key processes
Improve the performance of the college
Improving service to students; become more accountable for performance

Colleges were also asked for information about the organizational structure of the college, including the positions (by title) on the senior leadership team. The number of individuals ranged from 4 to 12, largely depending on the size of the institution. The titles reflected traditional functional operations of the college. These included academic affairs; student services; administrative, financial, and business services; human resources; planning, institutional effectiveness and research; and technology. Several also included a communications officer and workforce development officer. Some of the colleges had

changed the titles to reflect a student focus. Examples included student learning rather than academic affairs and learning support systems or student success rather than student services. One college used the term team leader rather than director or dean for some of its positions. The responsibilities and functions of these positions were explored further for the two Category I colleges and are discussed later in this chapter.

The two colleges that scored in the Quality Focused category were considered for further study. Since the Institutional Self-Assessment is a self-rating system, further evidence was sought to confirm the degree of implementation of CQI. Both colleges had recently been evaluated according to the Baldrige Education Criteria by an independent team of judges. Neither scored high enough to receive an award for quality in education, but both were identified as Best in Class and were commended for strengths in several Baldrige criteria areas, thus confirming their self-assessment results.

These two colleges were explored further using a case study methodology. To establish construct validity for the case studies, evidence was collected using the three tactics described by Yin (1994). First, multiple sources of evidence were used to collect data for each of the two cases. This study used surveys and questionnaires, document analysis, and semi-structured interviews. Second, a chain linking the pieces of evidence was constructed. The strategy used for analysis was to organize the data according to the study's five propositions. The third tactic was to ask the key informants to review the case study reports for their colleges to verify the accuracy of their responses. Each case study was developed and the results were written independently. A cross-study analysis was then conducted.

The two presidents and the members of their senior leadership team at these institutions completed the Occupational Personality Questionnaire. The presidents were interviewed by phone using a semi-structured interview process. The presidents were sent a written copy of their responses and were asked to provide corrections, additions, or deletions.

To protect the identities of the colleges and the respondents, College One and College Two and President One and President Two were used as identifiers.

Case Study One

Situational Variables

The first area of inquiry for this study concerned situational variables in colleges with similar levels of implementation of CQI. Situational variables are those contextual and organizational conditions that exist within a leadership setting (Yukl, 2001). Researchers have identified the motivation for adopting CQI and the time for implementation as variables that may affect its success (Entin, 1994; Hammons, 1994). President One stated that when he first introduced CQI to the institution that the underlying culture for it was already present, so it was a logical extension of the culture that already existed. Introducing CQI helped the college focus on its core business, which is student learning. Introducing CQI helped the institution improve processes and sustain continuous improvement. The college was not in a financial, organizational, or leadership crisis when CQI was adopted. College One began implementing CQI in 1990 and has therefore invested more than the 10 years needed to fully integrate the process (Entin, 1993).

The organizational structure and culture of the institution are also situational variables that may affect CQI's successful implementation (Entin, 1994; Horine & Hailey, 1995). College One was founded 26 years ago. President One has served as president more than 20 years and was part of the original administrative team that founded the school.

College One is a comprehensive community college that serves approximately 14,000 credit and 9,000 noncredit students per semester. It is one college in a multi-college district and is in an urban setting. The college's full-time personnel include 51 administrators, 140 faculty, and 250 staff members. There are approximately 1,000 part time employees. There are no faculty or staff unions at College One. College One is regionally accredited and is governed by an elected local board under the overall governance of the state's higher education coordinating board.

College One began implementing CQI in 1990. College One's mission and organization are now grounded in CQI. The institution has adopted the Baldrige Education Award Criteria as the basis for planning and assessment and the college strives to be a learning institution, which the president considers to be much broader and more comprehensive than CQI.

A variety of college documents[2] suggested that employees in all areas of the college are involved in continuous improvement and are focused on student learning. The Board of Trustees' top priorities are student retention, diversity, and remediation, and the college's processes are grounded in the Baldrige Education Award measures. The Institutional Advancement objectives are to achieve new levels of performance

[2] Documents included college websites, catalogs, planning documents performance and assessment documents, and organizational charts.

excellence through leadership in planning, research and analysis, measurement and evaluation, support and communication, and identification and procurement of external sources. The two purposes of the college's institutional effectiveness plan are improvement and accountability.

According to the college's operational philosophy, the college is a teaching, learning, community-building institution. The college offers a student-learning guarantee; it measures its behaviors against a statement of organizational values; and it makes decisions through a line organizational structure that receives input from those affected by the decisions. It is committed to maintaining the highest possible ratings and to being a team player in the community of educators, business people, elected officials, and others.

The college's strategic planning priorities are for student learning. The learning needs and expectations of the students and the community form the basis for the college's 7 Organizational Values and 10 Organizational Practices. Learning is also the foundation for the vision statement and the statement of purpose.

The college has five strategic planning priorities that are also centered in student learning: (1) responding to the learning needs of the diverse community the college serves, (2) maintaining a learning climate supporting student success through a core curriculum and learning outcomes, (3) advancing the success of all employees in a supportive learning climate, (4) promoting the purposeful and economical use of instructional and administrative technology, and (5) advancing student learning through institutional effectiveness.

Personality Attributes

The second area of inquiry concerned personality attributes of members of the senior leadership teams in colleges with similar levels of implementation of CQI. The president and senior leaders completed the online version of the Occupational Personality Questionnaire. Each individual who took the OPQ received an individual OPQ Expert System[3] report. Each system report grouped the attributes into three domains. The first group is Relationships with People. The OPQ Expert System converted raw scores to sten scores. (See Appendix C for a sample report.) The president's scores are displayed in Table 4-7. Of the nine attributes associated with Relationships with People, the president's scores were highest on these: Caring (sten score of 10), Democratic (10), Modest (8), Affiliative (7), and Independent (7).

Table 4-7
President One: Relationships with People Domain

	Attribute	Sten Score
R1	Persuasive	3
R2	Controlling	3
R3	Independent	7
R4	Outgoing	1
R5	Affiliative	7
R6	Socially confident	5
R7	Modest	8
R8	Democratic	10
R9	Caring	10

President One's profile indicated that he has a moderately high tendency to share opinions and express disagreement, but that he is unlikely to try to gain commitment through persuasion or control, preferring more democratic methods. Although he is not

[3] The OPQ Expert System is an integrated computer software package that uses OPQ profile scores as its input. From these scores, the system's various modules produce different kinds of reports (Saville & Holdsworth, 1996).

naturally outgoing, he is likely to prefer being with people to being alone and to form strong attachments. The President is not uneasy in social situations, but neither is he especially confident with new people nor eager to give speeches or presentations.

The president accepts people as they are and believes all people should be treated equally; he is reserved about his own achievements and is willing to share credit for his successes. He also uses a democratic style, encouraging others to participate. He prefers group decision-making and seeks the opinions of those who may be affected by decisions. He is also very caring, showing consideration for others, caring for those in need, and taking genuine interest in the welfare of others.

The president's democratic and caring attributes were evident in his relationships with others on campus. The president indicated that many people within the college influence him. His cabinet represents a very diverse group of people both in terms of personality and ethnic background. He is delighted in the advantage that the group gains from the diversity, which gives them different perspectives and teaches them all to pay attention in different ways. He also maintains contact with a number of individual faculty, and he often is present on campus for informal chats and discussions with students and staff.

The president identified 14 leaders who make up his leadership team. All 14 took the OPQ. Scores in Table 4-8 are grouped into the number of senior leaders with a low, medium, or high tendency for each attribute.[4] The president's range is indicated in the last column.

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[4] The Saville and Holdsworth, Ltd. Human Resource Management System produces job and individual match reports. Those reports identify a range for attributes from low to average to high levels. To determine an individual's match to a job profile, sten scores are plotted in a range (Appendix C). Ranges are also used in this study to group individual scores for comparison of the senior group to the president.

As a group the senior leaders' highest scores in the Relationships with People domain were on these attributes: Independent, Caring, and Modest. These three match areas where the president also scored high. The group is highly independent; 10 scored in the top range; 3 in the middle, and 1 in the low range. The group is also caring; 9 scored in the top range; 4 in the middle, and 1 in the low range. These leaders also have a strong tendency to be modest about their own achievements.

Table 4-8
College One Senior Leaders: Relationships with People Domain

	Senior Leaders In Sten Score Range						President's Range
	Low (1-4)		Medium (5-6)		High (7-10)		
Attribute	#	Percent	#	Percent	#	Percent	
R1 Persuasive	3	21.43%	9	64.29%	2	14.29%	Low
R2 Controlling	5	35.71%	3	21.43%	6	42.86%	Low
R3 Independent	1	7.14%	3	21.43%	10	71.43%	High
R4 Outgoing	2	14.29%	7	50.00%	5	35.71%	Low
R5 Affiliative	5	35.71%	4	28.57%	5	35.71%	High
R6 Socially confident	2	14.29%	6	42.86%	6	42.86%	Medium
R7 Modest	2	14.29%	4	28.57%	8	57.14%	High
R8 Democratic	3	21.43%	7	50.00%	4	28.57%	High
R9 Caring	1	7.14%	4	28.57%	9	64.29%	High
Total Relationships	24	19.05%	47	37.30%	55	43.65%	

The group's scores differed somewhat from the president's on several attributes. The majority (9 individuals) scored in the medium range on the Persuasive attribute. On the attribute Outgoing, 7 scored in the medium and 7 in the high range. The president's scores were in the low range for both of these attributes.

Half of the senior leaders group scored in the medium range on Democratic and 4 scored in the high range, so although they tend toward using democratic approaches with others, they are not as likely to do so as the president, whose sten score was 10 on the Democratic attribute.

The group was split in its scores on Controlling with 5 in the low range, 3 in the medium range, and 6 in the high range. The 6 in the high range scored opposite of the president on this attribute. The group was also split in its scores on Affiliative with 5 in the low range, 4 in medium, and 5 in high. The president was in the high range.

The second domain is Thinking. Of the 11 attributes associated with the Thinking Domain, the president's scores were highest on these: Artistic (10), Behavioral (9), Change Oriented (9), Innovative (8), and Conceptual (7). See Table 4-9.

Table 4-9
President One: Thinking Domain

Attribute		Sten Score
T1	Practical	4
T2	Data rational	1
T3	Artistic	10
T4	Behavioral	9
T5	Traditional	4
T6	Change oriented	9
T7	Conceptual	7
T8	Innovative	8
T9	Forward planning	3
T10	Detail conscious	3
T11	Conscientious	4

The president has a high appreciation for the arts and is likely to be involved in cultural activities. He also spends time analyzing his own thoughts and motives and reflecting on the behavior of other people. He values understanding how and why other people do things.

In the interview, the president stressed his interest in the behavior of others and in his own behavior; he has become interested in studying cultural communication. He likes to listen a lot and to encourage others to listen and adapt.

The president's scores indicated that he prefers to make decisions on the basis of opinions and feelings rather than numerical data. The president scored low on being data rational, which seemed inconsistent with the principles of CQI and the Baldrige Criteria. President One indicated that he has come to have a reluctant respect for data although he gets no particular joy or satisfaction from dealing with it. He has a healthy respect for how to use data, but he also knows how it can mislead. Therefore, he believes it needs to be tempered with intuition and the human element. He has learned the skill of using data, but he monitors its use, preferring that decisions be data influenced rather than data driven.

The profile indicated a balance between relying on the well proven versus the unconventional with a slightly higher tendency to experiment and try new approaches than to take the traditional approach. He is highly change oriented, indicating an adventurous spirit, a desire for variety, and willingness to accept change. He also tends to be a conceptual thinker who is intellectually curious and enjoys working with complex issues. The president is also innovative and generates creative ideas and imaginative solutions to problems.

The president is more likely to deal with problems as they arise than to plan for every possibility. He is not likely to spend time forecasting trends or setting targets; he prefers to make decisions when the need arises. Neither is he interested in repetitive, methodical work; he prefers to leave the detail work to others. He is more interested in addressing the main objectives than in conscientiously attending to details.

The scores for the senior leaders in College One are displayed in Table 4-10 grouped in the high, medium, and low ranges. The president's range is indicated in the last column.

Table 4-10
College One Senior Leaders: Thinking Domain

Senior Leaders In Sten Score Range								President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
Attribute		#	Percent	#	Percent	#	Percent	
T1	Practical	7	50.00%	2	14.29%	5	35.71%	Low
T2	Data rational	2	14.29%	7	50.00%	5	35.71%	Low
T3	Artistic	2	14.29%	7	50.00%	5	35.71%	High
T4	Behavioral	3	21.43%	4	28.57%	7	50.00%	High
T5	Traditional	4	28.57%	6	42.86%	4	28.57%	Low
T6	Change oriented	1	7.14%	7	50.00%	6	42.86%	High
T7	Conceptual	2	14.29%	4	28.57%	8	57.14%	High
T8	Innovative	2	14.29%	6	42.86%	6	42.86%	High
T9	Forward planning	3	21.43%	4	28.57%	7	50.00%	Low
T10	Detail conscious	4	28.57%	3	21.43%	7	50.00%	Low
T11	Conscientious	5	35.71%	4	28.57%	5	35.71%	Low
Total Thinking		35	22.73%	54	35.06%	65	42.21%	

At least half of the senior leaders scored high on Conceptual (8 high, 4 medium), Behavioral (7 high, 4 medium), Forward Planning (7 high, 4 medium), and Detail-Conscious (7 high, 3 medium). At least half match the president on the Conceptual and Behavioral attributes. However, the president scored low on both the Forward Planning and Detail-Conscious attributes.

The group scored in the medium to high range on four scales: Change-oriented (7 medium, 6 high), Artistic (7 medium and 5 high), Data-Rational (7 high and 5 medium), and Innovative (6 high and 6 medium). They were close to the president on the Change-oriented, Artistic and Innovative attributes, although less than half scored in the high range with the president. They tend to be much more data-rational than the president is.

Half of the senior leaders scored low on the practical attribute, where the president also scored low. However, 5 individuals scored high, indicating they like practical tasks. The team was split on the two other attributes, Conscientious and Traditional, with several individuals at all three levels.

The third domain is Feelings and Emotions. Of the 10 attributes associated with Feelings and Emotions, the president's scores were highest on these: Relaxed (9), Optimistic (8), and Critical (7). See Table 4-11.

Table 4-11
President One: Feelings and Emotions Domain

Attribute		Sten Score
F1	Relaxed	9
F2	Worrying	2
F3	Tough minded	6
F4	Emotional control	3
F5	Optimistic	8
F6	Critical	7
F7	Active	6
F8	Competitive	3
F9	Achieving	4
F10	Decisive	6
D1	Social desirability	8

The president's profile indicated that he is calm and relaxed, cool under pressure, and generally free from anxieties. He copes well with stress and can leave work at the office. He is rarely apprehensive; competition does not make him nervous; and he does not feel undo guilt over mistakes he might have made. Although he is sensitive, the president is moderately unlikely to suffer from hurt feelings or to be bothered by insults or what others think of him. However, he tends to be emotional and may show his feelings and be easy to read emotionally. He is not easily depressed and is likely to stay cheerful even when things go wrong. He is optimistic, expecting events to change for the

better. He has a tendency to probe the facts, look for disadvantages, and to challenge assumptions and poor arguments and to share these observations with others in the group.

The president is moderately active, displaying a bit more energy than others do. He is not highly competitive; participating is more important than winning; he is a good loser and is prepared to compromise rather than to force himself on others. The president is not personally highly ambitious; he values his personal and social life as much as his job. He sets reasonable goals rather than highly ambitious, competitive ones. The president strikes a balance in decision-making. He can take risks and make quick decisions but also may like to have some facts and to weigh alternatives.

The president's high social desirability score (8) indicated that he is usually cheerful, even in difficult times, that he does things well, and that he most often gives other people his full attention. He is generally not envious of others, does not spend time regretting what he has done, and rarely loses his temper.

When asked if he wished to add anything to the OPQ description of Feelings and Emotions, President One suggested another attribute that he felt was important: his sense of humor. He also values celebration and pointed out that joy is one of the college's stated values. He feels a great deal of affection and warmth for members of the college community; they are family.

The range of scores for the senior leaders in College One are displayed in Table 4-12 and are grouped in the high, medium, and low ranges. The president's range is indicated in the last column.

As a group the senior leaders' highest scores in the Feeling and Emotions domain were on these attributes: Critical and Optimistic. The president also scored in the high range on these two attributes.

Table 4-12
College One Senior Leaders: Feelings and Emotions Domain

Senior Leaders in Sten Score Range								President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
Attribute		#	Percent	#	Percent	#	Percent	
F1	Relaxed	2	14.29%	6	42.86%	6	42.86%	High
F2	Worrying	5	35.71%	6	42.86%	3	21.43%	Low
F3	Tough-minded	2	14.29%	8	57.14%	4	28.57%	Medium
F4	Emotional control	6	42.86%	4	28.57%	4	28.57%	Low
F5	Optimistic	1	7.14%	5	35.71%	8	57.14%	High
F6	Critical	1	7.14%	4	28.57%	9	64.29%	High
F7	Active	4	28.57%	6	42.86%	4	28.57%	Medium
F8	Competitive	6	42.86%	6	42.86%	2	14.29%	Low
F9	Achieving	7	50.00%	5	35.71%	2	14.29%	Low
F10	Decisive	2	14.29%	7	50.00%	5	35.71%	Medium
D1	Social desirability	5	35.71%	6	42.86%	3	21.43%	High
Total Feeling		41	26.62%	63	40.91%	50	32.47%	

The majority of the group (8 individuals) scored in the medium range on the Tough-minded attribute, matching the president's range. On the Decisive attribute, 7 individuals scored in the medium range with the president and 5 scored in the high range. The group also scored close to the president on five other attributes: Decisive, Achieving, Relaxed, and Competitive. On the Decisive attribute, 7 scored in the medium range with the president, and 5 scored in the high range. On the Achieving attribute, 7 scored in the low range with the president and 5 scored in the medium range. On the Relaxed attribute, 6 scored in the high range with the president and 5 scored in the medium range. On the Competitive attribute, an equal number of the senior leaders (6 individuals) scored in the high and medium ranges, an attribute on which the president scored high.

The group's scores were spread across the range on the Active and Emotional attributes, but 6 did score with the president in the medium range on Active and 6 scored in the low range with the president on the Emotional attribute. The group differed from the president on the Social Desirability attribute. Most (11 individuals) scored in the low to medium range. Only 3 scored in the high range with the president.

The scores on all 30 attributes for the 14 senior leaders were individually compared with the president. Scores that match or that were one score higher or lower than the president's scores are displayed as matches in Table 4-13. One senior leader matches the president on 18 of the 31 attributes; two match 14, and two match 13.

Leadership Styles

The OPQ analysis also produces a leadership scale based on the "task versus people" interactions described in the literature (Bass, 1990). (See Appendix C for a description of the leadership styles.) President One scored high as a Participative (sten score 8) and Consultative leader (8) and in the low range as a Delegative (4), Negotiative (4), and Directive leader (1). See Table 4-14.

As a Participative leader, President One is very concerned to make sure that everyone's views are heard and that the eventual decision is one agreed upon by the group as a whole. He is unlikely to use his position of authority to restrain outspoken group members, but he does try to involve other individuals.

As a Consultative leader, he is highly likely to gather opinions from his subordinates and to involve them in the process, but he tends to make the decisions himself. He is likely to be sensitive in providing negative feedback and will try to understand the behavior and motivations of his subordinates.

Table 4-13
President One Attribute Scores Compared to Each Senior Leader's Score

		Sten Scores														
Attribute		President	Senior Leaders													
R1	Persuasive	3	3	2	5	5	6	5	6	5	7	5	5	1	6	7
R2	Controlling	3	3	7	8	7	8	4	4	7	4	5	6	1	8	6
R3	Independent	7	8	7	8	9	8	4	5	10	7	6	9	6	8	9
R4	Outgoing	1	8	5	8	7	6	1	5	6	6	7	5	1	8	6
R5	Affiliative	7	6	7	8	3	8	4	5	5	4	9	6	1	9	4
R6	Socially confident	5	6	5	10	5	8	4	7	5	5	7	8	1	8	6
R7	Modest	8	8	9	5	2	9	8	8	8	7	6	5	7	1	5
R8	Democratic	10	3	7	6	7	6	6	6	3	8	6	8	1	6	6
R9	Caring	10	6	7	7	9	7	8	5	8	7	6	7	1	8	5
T1	Practical	4	7	4	8	1	2	5	6	1	1	3	9	1	7	7
T2	Data rational	1	2	5	5	4	7	5	5	6	6	6	8	9	10	9
T3	Artistic	10	9	6	9	8	6	5	6	2	9	5	3	7	5	5
T4	Behavioral	9	8	6	7	8	7	7	4	8	5	6	8	3	6	6
T5	Traditional	4	3	5	3	5	5	10	4	10	5	5	9	3	7	5
T6	Change oriented	9	6	8	8	6	6	3	6	5	6	9	9	6	7	8
T7	Conceptual	7	10	8	10	7	6	7	8	6	5	5	1	4	10	9
T8	Innovative	8	8	6	6	8	7	5	5	7	5	3	6	2	8	9
T9	Forward planning	3	6	9	6	6	8	8	6	7	1	3	7	2	9	7
T10	Detail conscious	3	8	9	3	6	9	8	4	5	4	5	9	3	8	7
T11	Conscientious	4	5	5	3	5	10	9	4	8	2	6	8	2	8	4
F1	Relaxed	9	6	7	9	6	7	6	7	5	2	6	8	3	7	6
F2	Worrying	2	6	9	2	6	4	5	4	6	8	6	5	9	4	1
F3	Tough minded	6	4	5	5	7	6	6	7	6	6	6	9	4	6	8
F4	Emotional control	3	4	5	4	3	8	9	8	4	5	2	5	8	3	6
F5	Optimistic	8	7	7	9	7	8	8	5	5	6	6	8	5	7	4
F6	Critical	7	7	2	10	8	7	5	5	9	10	5	7	6	9	10
F7	Active	6	6	8	8	2	5	9	6	5	6	8	5	4	4	2
F8	Competitive	3	4	3	3	5	5	7	5	6	7	5	4	4	4	6
F9	Achieving	4	2	8	8	4	4	4	4	5	6	4	4	5	6	6
F10	Decisive	6	6	5	5	7	7	5	5	5	2	5	4	9	7	8
D1	Social desirability	8	6	9	6	4	7	6	6	4	4	3	10	3	5	5
	Total Matches		18	14	14	13	13	10	10	10	9	9	9	9	7	6

The president is only moderately comfortable with the Delegative style and with minimizing his own involvement. He is unlikely to hand over responsibility, although he does not want to plan his subordinates' work. He may solicit views about the best

approach and his interest in understanding human nature leads him to be somewhat personally involved with his subordinates and their needs.

Table 4-14
President One: Leadership Style

Leadership Style		Sten Score
LS1	Directive	1
LS2	Delegative	4
LS3	Participative	8
LS4	Consultative	8
LS5	Negotiative	4
AD1	Adaptability	10

The president does not often act as a Negotiative leader. He is unlikely to use incentives or to negotiate based on needs although he is likely to understand others' needs. When he does need to negotiate, he is reasonably confident and may adapt his own behavior in response to lack of cooperation.

The president is unlikely to act using a Directive style. He is unlikely to keep responsibility for planning and control to himself or to issue instruction based on his own perceptions. He is, instead, interested in his subordinates' opinions and motivations and is likely to monitor others' work to assure that deadlines are met rather than to plan their work.

Because these leadership styles are not mutually exclusive, the profile also presents an adaptability scale. President One scored at the top (10) on the Adaptability measure. This score indicated a high capacity to adopt different styles of behavior in different sets of circumstances as needed.

The president indicated that it his practice to seek out ways to hear as many varied voices as he can. For example, he holds weekly "outposts" on campus, which give

anyone who wants to be heard an opportunity to sit and talk with him, to share ideas, ask questions, or bring up problems. He also said that he uses these interactions to practice his leadership style. His leadership profile indicates that as a Consultative leader he will gather opinions from others but will tend to make the decisions himself. However, the president said that rather than addressing problems as the president, he teaches individuals how to fix problems on their own. He encourages people to keep trying things; if nothing seems to work, he wants to know, and he'll help them try something else.

President One indicated that he used to be more of a micromanager. For example, early in his career at the college, before he was president, he set up a new program, and he directed all aspects of it for the next four years. Now he is less involved in the processes. He said that he has learned to trust others and their work. Before he was more of a delegator than he was a consensus builder. As his profile suggests, now he is more interested in participative leadership, in building consensus. However, he indicated that he is quite willing to use different approaches with different people, based on what works best for that individual.

The senior leaders' scores are grouped in the three ranges in Table 4-15. As a group, the senior leaders' average scores are spread across the five styles with a tendency to score in the medium range.

The lowest variability occurred on the Negotiative style with 11 scoring in the medium range and none in the high range. As a group, the senior leaders' scores do not closely match the president's scores. However, as a group their scores are lowest in the Directive and Delegative styles, and they all scored in the medium or low range on

Negotiative. These are the three styles on which the president fell in the low range. In addition, 7 of the group scored in the high range on Adaptability and another 6 were in the medium range, indicating that, like the president, they are likely to adopt different styles of behavior in different sets of circumstances as needed.

Table 4-15
College One Senior Leaders: Leadership Styles

Senior Leaders in Sten Score Range								President's
		Low (1-4)		Medium (5-6)		High (7-10)		Range
Leadership Style		#	Percent	#	Percent	#	Percent	
LS1	Directive	6	42.86%	3	21.43%	5	35.71%	Low
LS2	Delegative	6	42.86%	5	35.71%	3	21.43%	Low
LS3	Participative	3	21.43%	7	50.00%	4	28.57%	High
LS4	Consultative	4	28.57%	6	42.86%	4	28.57%	High
LS5	Negotiative	3	21.43%	11	78.57%	0	0.00%	Low
Total Leadership		22	31.43%	32	45.71%	16	22.86%	
AD1	Adaptability	1	7.14%	6	42.86%	7	50.00%	High

The senior leaders' scores are displayed in Table 4-16. Four of the leaders match 3 of the president's preferred leadership styles. One leader did not match any of them.

Table 4-16
President One Leadership Scores Compared to Each Senior Leader's Score

	Sten Score														
Style	President	Senior Leaders													
LS1 Directive	1	7	6	6	8	7	7	6	2	2	3	7	4	4	3
LS2 Delegative	4	4	5	4	4	3	4	3	10	6	6	5	7	5	7
LS3 Participative	8	7	8	6	6	6	4	6	1	7	7	5	6	4	6
LS4 Consultative	8	8	9	7	9	6	6	6	1	6	6	5	4	4	3
LS5 Negotiative	4	6	6	5	5	4	5	3	3	6	5	6	5	6	6
Total Matches		3	3	3	3	2	2	2	2	2	2	1	1	1	0

The OPQ Leadership Style analysis also provides an associate style for each leadership style. (See Appendix C for a description of the styles.) These are the behaviors most likely to occur when the leader is in the follower or subordinate position. The

Associate styles most compatible with the president's preference for Participative and Consultative leadership styles are Collaborating and Informative Associates. The senior leaders' scores are displayed in Table 4-17. The president's leadership styles are also displayed.

At least half of the senior leaders' scores were compatible with the president's leadership style for four of the five styles. In three of those four cases, half were also not compatible. With this level of diversity, the president's indicated ability to use different approaches with different people is particularly important.

Table 4-17
College One Senior Leader Associate Styles
Compared to President One's Leadership Styles

President's Leadership Style			Senior Leaders' Associate Styles		Low (1-4)		Medium (5-6)		High (7-10)	
					#	Percent	#	Percent	#	Percent
LS1	Directive	1	SS1	Receptive	7	50.00%	5	35.71%	2	14.29%
LS2	Delegative	4	SS2	Self-Reliant	5	35.71%	0	0.00%	9	64.29%
LS3	Participative	8	SS3	Collaborating	4	28.57%	3	21.43%	7	50.00%
LS4	Consultative	8	SS4	Informative	3	21.43%	2	14.29%	9	64.29%
LS5	Negotiative	4	SS5	Reciprocating	7	50.00%	2	14.29%	5	35.71%

As a group, the senior leaders scored highest on the Self-Reliant (9 individuals) and Informative (9) Associates scales. Self-reliant Associates prefer to work without constraints, have their own ideas, and enjoy opportunities to develop them with minimal intervention from their leaders. The president scored in the low range as a Delegative Leader, the style most likely to fit with Self-Reliant followers. Therefore, the president may find himself in situations where many of his subordinates are eager to work on their own while he is trying to encourage group involvement and consensus. The group also scored high on Informative Associates; in this role, they like to be involved in decision-making, but accept final decisions regardless of their own views. Therefore, the president

should find a receptive group when he is serving as a Consultative Leader. The senior leaders are also likely to be Collaborating Associates. Collaborating Associates contribute freely, like group work, and will challenge weak or incomplete ideas or plans.

As a group, the senior leaders are unlikely to be Receptive Associates, those who prefer traditional methods and clear instruction. Although 9 are Self-Reliant Associates, the other 5 scored in the low range and are not likely to work as well with a Delegative leader. The president's sten score of 10 on the Adaptability scale indicates that he has the ability to adapt to the varied associate styles of the senior leaders group.

Table 4-18 displays the Associate Styles of each leader and the president's leadership styles. One team member is a compatible associate with the president's level of leadership style for all five styles; one is compatible for four styles. Most are compatible for three or more of the styles. Only one individual is not compatible with any of the president's levels.

Table 4-18
President One Leadership Scores Compared to Each Senior Leader's Associate Score

President's Leadership Style			Senior Leaders' Associate Styles		Sten Scores													
LS1	Directive	1	SS1	Receptive	4	4	9	4	2	2	4	3	6	5	5	7	5	6
LS2	Delegative	4	SS2	Self-Reliant	4	7	4	2	8	9	10	8	7	4	4	9	9	8
LS3	Participative	8	SS3	Collaborative	7	7	4	1	10	9	10	8	7	5	5	3	4	6
LS4	Consultative	8	SS4	Informative	7	7	7	1	9	10	10	7	7	4	5	4	7	6
LS5	Negotiative	4	SS5	Negotiative	3	3	3	3	8	8	9	7	6	4	4	4	6	7

Team Types

Another OPQ scale analyzes responses in relation to eight team types. (See Appendix C for a description of the team types.) President One scored high on two team building styles: Innovator/Plant (8) and Team Worker (9). He scored in the middle on

three: Coordinator (5), Monitor-Evaluator (6) and Resource Investigator (6). He scored low on the other three: Shaper (2), Completer (1), and Implementer (1). See Table 4-19.

President One is moderately comfortable playing the role of Team Coordinator, listening to the views of others and maximizing the team's resources. He is unlikely to play the role of Shaper so will not be an obvious source of competitive drive. He is warm and relaxed rather than impatient and will rarely be seen as particularly assertive.

President One is likely to be a Team Innovator. He will contribute imaginative, creative ideas. In concert with a Coordinator role, his role as Innovator will include seeking the opinions of others regarding his suggestions and using other people's views to trigger new ideas of his own.

Table 4-19
President One: Team Types

Type		Sten Score
TT1	Coordinator	5
TT2	Shaper	2
TT3	Innovator/plant	8
TT4	Monitor-evaluator	6
TT5	Resource investigator	6
TT6	Completer	1
TT7	Team Worker	9
TT8	Implementer	1

President One may also adopt the characteristics of a Monitor-Evaluator. As such he can objectively consider the merits and disadvantages of his own and others' ideas. His judgments include some consideration of the facts, so as Monitor he may work to solve arguments or resolve debates.

President One also has characteristics that are somewhat typical of Resource Investigators. He may look for sources of information beyond the group and use those to consider and present ideas.

President One has a strong likelihood of acting as a Team Worker, expending considerable effort towards maintaining harmony in the team and acting to avert any interpersonal problems. Combined with his other skills, as a Team Worker he will also maintain objective focus on the decisions being made.

The president is not likely to be either the Completer or the Implementer, preferring to leave these roles to others. He will not worry about attending to the details or to personally planning the specific schedule and back up plans for a project.

The senior leaders' scores are grouped in the three ranges and are displayed in Table 4-20. The president's range is also displayed. In no case do the majority of senior leaders match the president's range. As a group, the senior leaders are most likely to serve as Monitor-Evaluators on the team. They will offer measured, dispassionate critical analysis and keep the team from pursuing misguided objectives. As a group, they are moderately to highly likely to serve in all of the other eight roles from time to time with a somewhat lesser tendency to serve as Team Worker.

In response to his overall philosophy and practice of leadership, the president indicated that he has studied many forms of leadership. He has tried most of them to see if they would work and has learned from them. His primary approach has come to be empowering others. He believes that the entire college is stronger if he empowers people to have the freedom to make responsible decisions. He has embraced the concept of the learning college and of leadership in which leaders and followers exert mutual influence.

He indicated that a formal leadership hierarchy can still be found "on paper" at his institution, but he said that hierarchy is not indicative of the way the college actually functions. Leadership is more pervasive throughout the college and throughout all levels of the hierarchy.

Table 4-20
College One Senior Leaders Team Types

Senior Leaders Sten Score Range								President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
	Team Type	#	Percent	#	Percent	#	Percent	
TT1	Coordinator	4	28.57%	5	35.71%	5	35.71%	Medium
TT2	Shaper	2	14.29%	7	50.00%	5	35.71%	Low
TT3	Innovator/Plant	3	21.43%	6	42.86%	5	35.71%	High
TT4	Monitor-Evaluator	0	0.00%	4	28.57%	10	71.43%	Medium
TT5	Resource Investigator	3	21.43%	6	42.86%	5	35.71%	Medium
TT6	Completer	4	28.57%	4	28.57%	6	42.86%	Low
TT7	Team Worker	2	14.29%	9	64.29%	3	21.43%	High
TT8	Implementer	5	35.71%	3	21.43%	6	42.86%	Low
	Total Team Types	23	20.54%	44	39.29%	45	40.18%	

He also stressed the importance of teams. The concepts of cross-functional teams and horizontal work structures are now embedded into the organization. For example, the college has been working with the regional accrediting agency on new standards, but much of the traditional language no longer fits the college's structure. There is no faculty governance structure, no faculty senate. There are no bargaining units. There is a faculty council, but it is not concerned primarily with college business; its interests and business are apart from the college. Instead of a separate faculty structure, the college has instructional teams. Administrators are all teachers; instructional specialists serve on teams with master teachers; the college has associates and instructional assistants; everyone teaches. The teaching/learning process is embedded in the organizational structure of the college. Throughout the college, very few activities are done by work

classification. Rather, people are actively involved in areas closest to their work. Everyone works in cross teams that are largely self-directed.

Some changes have occurred at the college since the implementation of CQI and later focus on the Baldrige Criteria. The president and the college are more data influenced (although not totally data driven) than they were before; there are more offices concerned with effectiveness and planning of priorities. The Office of Institutional Advancement was formed to lead the college's efforts in improvement and accountability.

Another change is that the college is constantly making changes. Change has become a part of the organizational structure. Accountability is also part of the culture now. There is a formal expectation for professional development; all employees have a contractual obligation to be involved in professional development. The college also has a comprehensive, inclusive method for tracking and categorizing what everybody does according to the five college priorities.

Intervening Variables

A final area that may affect leadership within a certain context is the set of intervening variables present. In implementation of CQI, intervening variables are likely to include presidential commitment and involvement, follower commitment and involvement, training, management of change, and reaction to external events that may affect the college.

President One provided the vision and organized the implementation. He has been involved from the inception through the expansion to using the Baldrige Criteria. The president is also a national leader in CQI activities and organizations and in working with accrediting teams to develop a method for using the Baldrige Criteria for accreditation.

The president has also involved others in the process. He said that all employees share the responsibility for continuously improving their areas of primary influence. Maintaining the apparatus or processes of CQI is the responsibility of the Vice President for Institutional Advancement and the Office of Institutional Effectiveness. The Cabinet and President have the responsibility for monitoring the overall college Key Performance Indicators (KPI) on a monthly basis. If a KPI is in the expected range, then the Cabinet spends no more time on in it. If, however, an indicator is out of range, the Cabinet looks at it and helps the appropriate Vice President decide what action to take.

President One began to implement CQI in an institution where he had already exerted quite a bit of influence on the culture, a culture that supported the concepts of teamwork and student focus. He started the process by having a consultant come to campus and verse everybody on the language and processes of CQI so that everyone would have the same basic understanding. He also had basic workshops that everyone attended. In retrospect, he feels they provided too much information in the early stages. Not all of the information was relevant to everyone; it puzzled some and overwhelmed others. The President learned from those early activities, and the college very rarely has such activities now, preferring to present information and processes as they are needed.

Training for faculty came as it was deemed appropriate and needed in the implementation process. Processes and approaches attractive to faculty were used. For example, the faculty were introduced to the theory and practices of cooperative learning, including classroom assessment, working in groups, and providing immediate feedback. These processes fit naturally into continuous improvement. Now, all new faculty get cooperative learning training.

CQI approaches such as statistical process controls are used more in teams and on an as needed basis. For example, the college revised its English for Speakers of Other Languages program. The whole curriculum was changed through a CQI process team with internal facilitators who used CQI techniques. Team members received just in time learning/training as needed to conduct the process. When the particular tools were no longer needed, their use was discontinued.

The Cabinet did receive formal training, and teams of 10 or more have been sent to conferences to gain knowledge and training. The college has also involved about 25 leaders in the state Baldrige training for workforce performance excellence.

The college's primary focus now is on following the discipline of the Baldrige Criteria, which the president considers to be a much broader, more comprehensive structure for an educational institution than basic TQM business principles. The college now has a yearlong new employee orientation. There is much CQI embedded in that, but CQI processes are not singled out. They are most obvious in the service excellence component of the training. In addition, new faculty get training for two or three years in cooperative learning strategies. They are required to provide evidence that they are incorporating cooperative learning into the classroom. They can modify CQI and Cooperative Learning with other approaches. Their teaching approach is still individual and varies among instructors.

The college's strategic planning priorities are for student learning. All new group leaders (supervisors) attend the Organizational Learning Institute, a two-day session on internal policies, processes, and procedures.

College One has developed a Quality Enhancement Plan to improve student learning and retention rates. Participation in the Quality Enhancement Plan is mandatory for all full-time faculty/teaching personnel. The faculty administer a Student Profile form at the beginning of the semester, attend monthly discipline meetings, and monitor their efforts to improve Student Learning/In-Course retention. They may use the college profile or develop their own. For adjunct faculty, the monthly meetings are voluntary, but adjuncts must administer the profile and complete monthly forms. Attendance at discipline meetings is also optional for adjunct faculty.

President One did not identify any major state or local events that might affect the college's success. He did indicate that the regular cycles of economic prosperity and downturns and the rapid growth of the college have required adjustments. The president indicated that the Baldrige approach requires discipline and is therefore most helpful during difficult times when discipline is needed more. The Baldrige approach keeps the college focused. If, for instance, the college is in a low budgetary cycle, making decisions about what and how to cut is clear. The process forces the focus to be on student learning and the monthly action plans. Priorities are already known; activities can be adjusted based on the priorities.

The president indicated a need to continuously adjust processes. For example, increases in retirements and new hires reduce the overall campus understanding and experience with CQI. Information sharing and training sessions must be adjusted to provide the tools and knowledge needed for those who are new to the process even though the college is not.

As for his own continuous learning in leadership, President One describes himself as fairly new to the discipline of using Key Performance Indicators. Keeping to KPI's means keeping levels of influence where they should be. He is interested in working on that and on seeing what it does to his leadership approach.

The president has greater expectations for the 21st century. He expects that the college will continue its CQI journey and will continue to be involved in a number of national learning college projects. He will continue to seek outside input and assessment, which the college will use for improving and for keeping the appropriate focus. The president is also interested in continuing the focus on the Baldrige Criteria and on using them for assessment and as accreditation criteria.

Case Study Two

Situational Variables

As in Case Study One, the first area explored concerned situational variables in the college. Situational variables are those contextual and organizational conditions that exist within a leadership setting (Yukl, 2001). Researchers have identified the motivation for adopting CQI and the time for implementation as variables that may affect its success (Entin, 1994; Hammons, 1994).

President Two introduced CQI to College Two almost immediately after he became president. He felt that the college was already a great institution, and he wanted to take it to a higher level. He believed that CQI could be used to improve processes with measurable data and results as indicators. College Two began its Quality journey in 1991 so has invested the 10 years needed to fully integrate the process (Entin, 1993). Although the president did not introduce CQI to address a crisis, his plans for implementation were

challenged early in the process. When a recession began in 1992, fiscal resources dried up. The college received no increase in funding from 1992-1996 yet had to honor a union agreement that required an 18% faculty salary increase over a 3-year period. The College did not abandon its 5-year plan for implementation despite the financial difficulties that the college faced.

College Two was founded over 50 years ago. It is the largest single-campus community college in its state and serves a large urban and suburban population. It is a comprehensive community college that enrolls approximately 27,500 credit and 15,000 noncredit and continuing education students each semester. The college's full-time employees include 70 administrators, 370 faculty, and 388 staff members. College Two has approximately 780 part-time faculty.[5]

College Two is regionally accredited. Governance at the college involves the interaction of a number of entities including the executive management team, the academic and classified senates, bargaining units, faculty and staff union chapters, campus committees, the faculty association, student government and the Board of Trustees. The Board of Trustees is empowered by the state constitution as the policy-making body of the district. The locally elected Board sets policies needed to govern the College, and the procedures used to carry out the policies effectively are defined through the College's shared governance process.

The President described the college as being a stable, outstanding institution when he became president. Introducing CQI helped to create a systems approach for the institution. The college now has over 30 standing committees or subcommittees

[5] A variety of college documents were used to gather information about the college. Documents included the college's website, catalog, strategic plan, systems plan, assessment documents and organizational chart.

organized to review or oversee all areas of the college and to make recommendations for policy and procedure development and modification. The leadership council, made up of the president and 15 other campus leaders, including the three vice presidents, a division dean, and the officers of the academic senate, classified staff senate, faculty and staff unions and the student association, serves as the forum for discussion and input from representatives from all segments of the college.

One of the committees, the Quality Steering Team, oversees, monitors, encourages, and supports the process of establishing a CQI environment on campus. Its membership includes the college's director of staff development and organizational learning, the vice president for student learning, officers and an additional member of the academic and classified senates, the president of the faculty union, and two managers appointed by the president. The president serves as the team's sponsor and as an ex officio member. This group seeks to institutionalize Quality Improvement across campus. It develops, monitors, and reviews the 3-year quality plan; implements and monitors the systems framework; develops the information and training plan, assesses current practices and establishes quality work teams to meet the operational needs of the college.

College Two's mission is to provide accessible and affordable quality learning opportunities, programs, and services and to advance economic growth and global competitiveness through its programs and services that contribute to continuous workforce improvement.

The college's vision is to become a premier community college; to be a leader in teaching, learning, programs, and services; to provide access and a focus on student success within a climate of integrity and respect; and to consistently exceed expectations.

The organizational structure of College Two is in large part defined by an elaborate governance structure mandated by state law, so major changes in organizational structure have not occurred as CQI has been implemented. However, President Two believes continuous quality can work in any structure. In addition, he has been able to make some changes. The president learned about the 1995 Baldrige Award Criteria for Education at a 1995 CQIN meeting. College Two has closely followed the development of the Baldrige Criteria for Education and was the first community college to use the Criteria as an alternative accreditation study in 1997-98. He has used the criteria to frame a systems approach for the college's critical functions. The College has aligned its nine critical systems with the seven Baldrige criteria.

The college has also redesigned many committees and their purposes. For example, the curriculum committee generally provided a curriculum approval process without providing much input. Curriculum review is now part of a larger Curriculum and Instruction Committee, which is concerned with educational design, delivery and assessment.

Although the formal, vertical organizational structure still exists, the college now has cross-functional teams and process improvement teams that cut horizontally across the formal structure. These groups function as teams rather than committees. The seven vice presidents and president, known as the executive management team rather than the cabinet, also function as a team and use a team management approach within their areas. The college provides team training for those who serve on the college's various teams.

Using the Baldrige Criteria for assessment has allowed the president to put all the pieces together and to determine where gaps occur. For example, the college had some

separation in the planning process; policy development and planning occurred separately. Now the leadership council, which has leaders representing all areas of the college, is responsible for evaluating and advising all proposals and recommendations from college-wide committees and from other groups or individuals.

President Two has served as president for 11 years. He brought with him over 10 years' experience as president both in the state and elsewhere in the country. He also served in several other administrative positions in other institutions.

Personality Attributes

The second area of inquiry concerned personality attributes of members of the senior leadership teams in colleges with similar levels of implementation of CQI. The President and senior leaders completed the online version of the Occupational Personality Questionnaire. Each individual who took the OPQ received an individual report. Each system report grouped the attributes into three domains. The first group is Relationships with People. The Expert System converted raw scores to sten scores. The president's scores for the Relationships with People Domain are displayed in Table 4-21. Of the nine attributes associated with Relationships with People, the president's scores were highest on these: Independent (7), Modest (7), and Democratic (7).

The profile indicated a balance in the kind of influence that the president likes to have over events. He is equally comfortable influencing outcomes by persuading others and holding back allowing others to exert influence. The same balance was suggested in decision making and controlling groups, sometimes taking charge and other times letting others take the lead. He has a moderately high tendency to share opinions and express disagreement, though he is not likely to act on his own without agreement of the group.

Table 4-21
President Two: Relationships with People Domain

	Attribute	Sten Score
R1	Persuasive	6
R2	Controlling	5
R3	Independent	7
R4	Outgoing	1
R5	Affiliative	3
R6	Socially confident	4
R7	Modest	7
R8	Democratic	7
R9	Caring	6

The profile indicated that President Two is not naturally outgoing and does not seek to be the center of attention. He is comfortable being alone and may be somewhat uneasy in new situations or directing social situations.

The president is reserved about his own achievements and accepts people as they are. The president tends to adopt a democratic style and encourages others to participate. He prefers group decision-making. The profile indicated a moderate tendency to be interested in the welfare of others, to exhibit sympathy, and to be tolerant of views different than his.

When interviewed, the president confirmed that he embraces participation and involvement in decision-making; he doesn't make decisions by himself. He encourages the college teams to use a consensus model.

He also stressed his interest in the welfare of his staff, indicating he takes a friendly, personal approach to his interactions with employees. He also mentioned that the OPQ did not provide the opportunity to stress the importance of celebrating the accomplishments of others, a key component of CQI. He likes to provide positive

reinforcement and has learned to recognize people more, which he feels is an important leadership behavior.

Of the 9 leaders identified as members of the executive management team, three declined to participate. The scores discussed in this case study represent the 6 who did take the OPQ.

Scores in Table 4-22 are grouped into the number of senior leaders with a low, medium, or high tendency for each attribute. The president's range is indicated in the last column.

Table 4-22
College One Senior Leaders: Relationships with People Domain

Senior Leaders in Sten Score Range								President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
Attribute		#	Percent	#	Percent	#	Percent	
R1	Persuasive	2	33.33%	3	50.00%	1	16.67%	Medium
R2	Controlling	0	0.00%	5	83.33%	1	16.67%	Medium
R3	Independent	1	16.67%	0	0.00%	5	83.33%	High
R5	Affiliative	1	16.67%	1	16.67%	4	66.67%	Low
R6	Socially confident	1	16.67%	1	16.67%	4	66.67%	Low
R7	Modest	2	33.33%	0	0.00%	4	66.67%	High
R8	Democratic	0	0.00%	4	66.67%	2	33.33%	High
R9	Caring	1	16.67%	3	50.00%	2	33.33%	Medium
Total Relationships		9	16.67%	20	37.04%	25	46.30%	

In the domain of Relationships with People, group scores were highest on the Independent attribute (5 of 6 scored in the high range). On the Modest attribute, four of six scored in the high range. These are two of the areas where the president also scored high. Five of the group also scored in the medium range on the attribute for controlling; the president also scored in the medium range.

The group did not have majority matches with the president on the other 6 attributes in Relationships with People. On Affiliative and Socially Confident, 4 of 6

scored in the high range; the president scored in the low range on both. The group scored in the medium (4 individuals) and high (2 individuals) ranges on Democratic, an attribute where the president scored a 7. The group is likely to be moderately to highly democratic, much like the president.

The second domain is Thinking. The president scored in the high range on 7 of the 11 attributes. He scored in the medium range on the Traditional, Innovative, and Conscientious attributes, and low on the Practical attribute. See Table 4-23.

Table 4-23
President Two: Thinking Domain

Attribute		Sten Score
T1	Practical	2
T2	Data Rational	7
T3	Artistic	7
T4	Behavioral	7
T5	Traditional	5
T6	Change Oriented	9
T7	Conceptual	10
T8	Innovative	6
T9	Forward Planning	8
T10	Detail Conscious	8
T11	Conscientious	6

The president scored moderately high in the area of enjoying dealing with statistical information. He tends to be a logical thinker and to make decisions based on fact. At the same time, he indicates an appreciation for the arts and sensitivity to the beauty of nature. The president has a tendency to spend time analyzing his own thoughts and motives and reflecting on the behavior of others. He finds value in knowing how and why others do things.

The profile also indicated a balance between relying on the traditional and well proven versus the unconventional, radical and unproven. However, he scored high on

being-changed oriented, indicating an adventurous approach, a willingness to accept change and to try new approaches. The president also scored at the top of the attribute in the area of conceptual thinking, indicating that he acquires knowledge quickly, takes a theoretical approach to problem solving and is good with hypothetical and abstract problems. He is intellectually curious and enjoys working with complex issues. The president scored in the midrange on innovative thinking indicating he prefers a balance between producing original approaches to problems and following others' approaches and between developing creative, inventive solutions and testing or implementing others' ideas.

The president has a tendency to be a forward planner, to think things through before starting. He enjoys making predictions and planning projects. He prepares in advance, sets targets, forecasts trends and decides priorities. He tends to be good at methodical work and is generally precise with facts. However, he is only moderately inclined to adhere strictly to details, to ensure that a fixed schedule is followed, or to persevere with tedious tasks.

In his interview the president confirmed the scores he received in the Thinking Domain. He stressed his interest in human nature and in what motivates others. He also acknowledged that he is task oriented and likes to work on goals; he is an organized person who emphasizes planning. His tendency is to be rational; he works to understand what is not rational. The president is always learning and is eager to learn more. He is a visionary; he looks toward the future and is always trying to improve. He engages in long range planning.

The president also believes that he has become more patient and a better listener than earlier in his career. He prefers to get a lot of information first, before he forms judgments, develops plans or makes decisions. He is also delegating more responsibility than earlier in his career. He has learned to focus on improving processes rather than condemning people. He believes that most problems are related to systems, not to individuals.

Ranges for scores in the Thinking Domain for senior leaders in College Two are displayed in Table 4-24. The president's range is displayed in the last column. Overall, the group scored fairly evenly over the range. The majority (4 of 6) of the senior leaders scored in the high range on the Artistic and Forward Planning attributes, matching the president's high range score. The group scored in lower ranges on all of the other attributes where the president scored high, although half did score in the high range for Change Oriented and two scored in the medium range. So the group tends to be change oriented, but some individuals are perhaps not as highly comfortable with change as the president is. In addition, 4 of the 6 scored in the low range for Conceptual and Detail Conscious, two other areas where the president scored high. They scored higher than the president did on the Innovative attribute, suggesting they are more likely to generate creative ideas and show ingenuity than the president is.

The third domain is Feelings and Emotions. The president's scores are displayed in Table 4-25. The president scored high on 5 of the 10 attributes. He scored in the medium range on Tough-minded, Achieving, and Decisive. He scored low on the attributes for Worrying and Active.

Table 4-24
College Two Senior Leaders: Thinking Domain

Senior Leaders in Sten Score Range								President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
Attribute		#	Percent	#	Percent	#	Percent	
T1	Practical	2	33.33%	3	50.00%	1	16.67%	Low
T2	Data rational	2	33.33%	2	33.33%	2	33.33%	High
T3	Artistic	1	16.67%	1	16.67%	4	66.67%	High
T4	Behavioral	2	33.33%	1	16.67%	3	50.00%	High
T5	Traditional	2	33.33%	1	16.67%	3	50.00%	Medium
T6	Change oriented	1	16.67%	2	33.33%	3	50.00%	High
T7	Conceptual	4	66.67%	2	33.33%	0	0.00%	High
T8	Innovative	0	0.00%	2	33.33%	4	66.67%	Medium
T9	Forward planning	0	0.00%	2	33.33%	4	66.67%	High
T10	Detail conscious	4	66.67%	1	16.67%	1	16.67%	High
T11	Conscientious	2	33.33%	3	50.00%	1	16.67%	Medium
Total Thinking		20	30.30%	20	30.30%	26	39.39%	

Table 4-25
President Two: Feelings and Emotions

Attribute		Sten Score
F1	Relaxed	9
F2	Worrying	2
F3	Tough minded	5
F4	Emotional control	9
F5	Optimistic	8
F6	Critical	7
F7	Active	3
F8	Competitive	4
F9	Achieving	7
F10	Decisive	5
D1	Social desirability	8

The president's profile indicates an individual who is calm and relaxed, cool under pressure, and generally free from anxieties. He copes well with stress and can switch off from work. He is rarely apprehensive; competition does not make nervous; and he does not feel undo guilt over mistakes he might have made.

The president shows a balance in the area of sensitivity. While he does not suffer from hurt feelings or moodiness, he is sensitive to what others think of him. However, he

is good at controlling his emotions and temper, showing restraint in expressing emotions. He is not easily depressed and is cheerful even when things go wrong. He is optimistic, expecting events to change for the good. He has a tendency to probe the facts, look for disadvantages, and to challenge assumptions and poor arguments and to share these observations with others in a group.

The president does not display high physical, nervous energy, nor is he highly competitive. He values participation more highly than winning and is a good loser. He prefers compromise to forcing his views on others. Nevertheless, he does enjoy achieving his goals and sets reasonably ambitious targets. He tends to avoid hasty decisions, preferring to review the facts and weigh alternatives.

The range of scores for the senior leaders in College Two is displayed in Table 4-26. The president's range is displayed in the last column. The senior leaders tended to score more in the medium range than the president, and their scores are fairly evenly distributed over the range. The only attribute in the Feeling and Emotions domain where the majority match the president was in Worrying: 4 scored in the low range and 1 in the medium range. The group was close to the president's score on three other attributes. On Relaxed, 3 scored in the high range and three in the medium range and 3 scored in the high range and 2 in the medium range on Optimistic. The president scored low on the Competitive attribute, and 3 of the senior leaders also scored in the low range; the other 3 scored in the middle range. Four of the leaders did score in the high range on Decisive, making them slightly more likely than the president to rapidly assess situations, make decisions, and take risks. As a group, the senior leaders are more physically active than

the president is: 3 scored in the medium and 3 in the high range, whereas the president scored in the low range.

The group scored somewhat lower than the president on the Achieving attribute. Four individuals scored in the medium range. The group also scored low on Emotional Control; 5 individuals scored in the low range. The leaders are more likely to show their feelings and to have emotional responses that are easily detected. Finally, the group was somewhat lower than the president on the Social Desirability attribute. Half scored in the medium range, and only two scored in the high range with the president.

Table 4-26
College Two Senior Leaders: Feelings and Emotions Domain

		Senior Leaders in Score Range						President's Range
		Low (1-4)		Medium (5-6)		High (7-10)		
	Attribute	#	Percent	#	Percent	#	Percent	
F1	Relaxed	0	0.00%	3	50.00%	3	50.00%	High
F2	Worrying	4	66.67%	1	16.67%	1	16.67%	Low
F3	Tough-minded	3	50.00%	1	16.67%	2	33.33%	Medium
F4	Emotional control	5	83.33%	1	16.67%	0	0.00%	High
F5	Optimistic	1	16.67%	2	33.33%	3	50.00%	High
F6	Critical	2	33.33%	2	33.33%	2	33.33%	High
F7	Active	0	0.00%	3	50.00%	3	50.00%	Low
F8	Competitive	3	50.00%	3	50.00%	0	0.00%	Low
F9	Achieving	1	16.67%	4	66.67%	1	16.67%	High
F10	Decisive	1	16.67%	1	16.67%	4	66.67%	Medium
D1	Social desirability	1	16.67%	3	50.00%	2	33.33%	High
	Total Feelings	21	31.82%	24	36.36%	21	31.82%	

The scores on all 30 attributes for the senior leaders were also individually compared with the president and are displayed in Table 4-27. Scores that match or that were one score higher or lower than the president's scores were considered as matching the president on that attribute. One senior leader matches the president on 21 of the 31 attributes; 1 matches on 17 of the attributes.

Table 4-27
President Two Attribute Scores Compared to Each Senior Leader's Score

		Sten Scores						
	Attribute	President	Senior Leaders					
R1	Persuasive	6	6	7	6	4	4	6
R2	Controlling	5	6	6	6	6	6	7
R3	Independent	7	7	7	7	4	7	7
R4	Outgoing	1	7	4	6	5	6	7
R5	Affiliative	3	7	3	5	7	7	7
R6	Socially confident	4	8	2	8	7	6	7
R7	Modest	7	4	9	7	7	7	4
R8	Democratic	7	7	6	8	6	5	5
R9	Caring	6	7	8	4	5	5	5
T1	Practical	2	3	3	6	7	6	6
T2	Data rational	7	2	5	4	8	7	6
T3	Artistic	7	7	7	8	5	7	3
T4	Behavioral	7	8	5	7	9	4	3
T5	Traditional	5	8	4	6	9	2	7
T6	Change oriented	9	8	7	5	4	7	6
T7	Conceptual	10	6	1	4	6	4	4
T8	Innovative	6	8	10	7	5	8	5
T9	Forward planning	8	9	9	8	7	6	5
T10	Detail conscious	8	8	4	3	5	4	2
T11	Conscientious	6	5	7	6	4	5	3
F1	Relaxed	9	8	9	8	6	5	5
F2	Worrying	2	3	2	4	6	4	7
F3	Tough minded	5	5	4	7	8	3	4
F4	Emotional control	9	3	4	4	5	4	4
F5	Optimistic	8	7	8	4	7	5	6
F6	Critical	7	6	8	7	4	4	6
F7	Active	3	8	5	7	6	8	6
F8	Competitive	4	4	3	6	4	6	5
F9	Achieving	7	6	7	5	6	4	5
F10	Decisive	5	5	9	7	3	9	8
D1	Social desirability	8	7	5	5	9	6	4
	Total Matches		21	17	13	11	8	7

Leadership Styles

The OPQ analysis also produces a leadership scale based on the "task versus people" interactions described in the literature (Bass, 1990). President Two scored in the midrange on all five leadership styles. See Table 4-28. His profile suggests he is likely to

exhibit all five styles from time to time but that he has moderate tendencies within the range of each style. He is likely to behave in a moderately Directive way, providing his subordinates with instructions and a plan for implementation. However, he is only moderately likely to monitor their work. He has some interest in his subordinates' opinions and shows some consideration for others' motives and their reactions to his style.

Table 4-28
President Two: Leadership Styles

Leadership Style		Sten Score
LS1	Directive	6
LS2	Delegative	6
LS3	Participative	4
LS4	Consultative	5
LS5	Negotiative	6
AD1	Adaptability	9

He is also likely to behave in a moderately Delegative way. He has interest in defining the task and method for implementation given to a subordinate, but he is also interested in seeking their views first. He may also balance the need for delegating with the personal needs of those that he assigns the work. He is also likely to use his own relaxed and cheerful demeanor to influence others.

President Two is likely to behave in a moderately Consultative way. His willingness to gather opinions and involve subordinates in decision-making is balanced against his own evaluation and conclusions. He is also likely to provide feedback with sensitivity and awareness of the subordinates' behavior and motivations.

The president may also behave as a moderately Negotiative Leader. He may try to find incentives to achieve the appropriate reaction, but he is also somewhat willing to

issue direct instructions. He is reasonably confident and can adapt his behavior as needed when responding as a Negotiative leader.

The president may also behave as a Participative Leader, but this behavior is slightly less likely than the other behaviors. He is moderately concerned that everyone's views be heard and that everyone in the group agrees to the eventual decision. He is also interested in the welfare of his subordinates as well as in their motivations.

Because these leadership styles are not mutually exclusive, the profile also presents an Adaptability scale. President Two scored very high (9) on the Adaptability measure. This indicates a high capacity to adopt different styles of behavior in different sets of circumstances.

When interviewed, the president discussed several leadership situations. Overall, the president embraces the Servant-Leader philosophy. His responsibility is to do whatever it takes to achieve the college's mission, to move forward, and to support staff. He is particularly interested in symbolic leadership and in how powerful certain symbols are to individuals or groups of individuals. He also recognizes that current leaders must have really good political skills, and he wants learn more about the political aspects of leadership and how best to address them. He indicated that networking is a good tool for addressing political situations. He recognizes that constituency groups often politicize events, which makes it harder to form a sense of community for the college as a whole.

The senior leaders' scores on the Leadership Style scale are grouped in the three ranges in Table 4-29. The president's ranges are displayed in the last column. Like the president, the senior leaders tend to score in the medium range on the five leadership styles with 63% of the responses falling in the medium range. The majority match the

president by falling into the medium range on Directive and Consultative. Half also fell into the medium range on Delegative. The group is more likely than the president to use the Participative Style; 4 scored in the medium range and 2 in the high range. The president scored in the low range on Participative. On the Adaptability scale, 4 of the 6 scored in the medium range, indicating a moderate ability to adopt different styles in different sets of circumstances. The president scored 9.

Table 4-29
College Two Senior Leaders: Leadership Styles

Senior Leaders in Sten Score Range								President's
		Low (1-4)		Medium (5-6)		High (7-10)		Range
Leadership Style		#	Percent	#	Percent	#	Percent	
LS1	Directive	1	16.67%	4	66.67%	1	16.67%	Medium
LS2	Delegative	3	50.00%	3	50.00%	0	0.00%	Medium
LS3	Participative	0	0.00%	4	66.67%	2	33.33%	Low
LS4	Consultative	0	0.00%	5	83.33%	1	16.67%	Medium
LS5	Negotiative	3	50.00%	3	50.00%	0	0.00%	Medium
Total Leadership		7	23.33%	19	63.33%	4	13.33%	
AD1	Adaptability	1	16.67%	4	66.67%	1	16.67%	High

The senior leaders' individual leadership style scores and the president's scores are displayed in Table 4-30. Two of the senior leaders are very likely to use the same leadership styles as the president in all but the Negotiative Style. Three senior leaders match the president on three of the five styles.

Table 4-30
President Two Leadership Scores
Compared To Each Senior Leader's Score

	Sten Score						
Style	President	Senior Leaders					
LS1 Directive	6	5	6	5	4	7	6
LS2 Delegative	6	6	6	4	4	6	4
LS3 Participative	4	5	5	7	5	6	7
LS4 Consultative	5	6	6	6	6	5	7
LS5 Negotiative	6	4	4	6	6	4	6
Total		4	4	3	3	3	2

The OPQ Leadership Style analysis also provides an associate style for each leadership style. These are the behaviors most likely to occur when the leader is in the follower or subordinate position. The senior leaders' associate scores are displayed in Table 4-31 with the president's leadership scores.

Table 4-31
College Two Senior Leader Associate Styles
Compared to President Two's Leadership Styles

President's Leadership Style			Senior Leaders' Associate Styles		Low (1-4)		Medium (5-6)		High (7-10)	
					#	Percent	#	Percent	#	Percent
LS1	Directive	6	SS1	Receptive	4	66.67%	1	16.67%	1	16.67%
LS2	Delegative	6	SS2	Self-Reliant	0	0.00%	2	33.33%	4	66.67%
LS3	Participative	4	SS3	Collaborating	1	16.67%	1	16.67%	4	66.67%
LS4	Consultative	5	SS4	Informative	1	16.67%	2	33.33%	3	50.00%
LS5	Negotiative	6	SS5	Reciprocating	1	16.67%	5	83.33%	0	0.00%

Except for the Negotiative/Reciprocating pair, the group scores of the senior leaders' associate styles did not tend to fall in the middle range with the president's leadership styles. On the Self-Reliant associate, 4 of 6 scored in the high range and 4 of the 6 also scored in the high range for the Collaborating associate. Self-Reliant associates prefer to work without constraints, have their own ideas and enjoy opportunities to develop them with minimal intervention from their leaders. Collaborating associates enjoy the collaborative decision making process and like everyone to contribute ideas. Four scored in the low range for the Receptive associate indicating a low preference for preferring clear directions from their leader. Five scored in the medium range for the Reciprocating Associate indicating a moderate willingness to speak up with their leaders and to prefer to be persuaded rather than directed.

Table 4-32 displays the Associate Styles of each of the 6 senior leaders. The president's leadership styles are in the first column. One team member is a compatible associate with the president for four of the five styles; another is compatible for three.

Table 4-32
President Two Leadership Scores Compared to Each Senior Leader's Associate Score

President's Leadership Style			Senior Leaders' Associate Styles		Sten Score					
LS1	Directive	6	SS1	Receptive	8	4	5	4	3	4
LS2	Delegative	6	SS2	Self-Reliant	5	6	9	10	7	8
LS3	Participative	4	SS3	Collaborating	4	5	8	9	7	7
LS4	Consultative	5	SS4	Informative	6	5	8	7	4	7
LS5	Negotiative	6	SS5	Reciprocating	5	6	6	5	4	5

Team Types

Another OPQ scale analyzes responses in relation to eight team types. President Two scored high (8 on 10 point scale) in four of the eight team-building styles: Coordinator, Innovator/Plant, Monitor-Evaluator, and Implementer. He scored very low (2) on Shaper, and low to middle on the other three: Resource Investigator (4), Completer (6), and Team Worker (6). See Table 4-33.

When working as part of a team, President Two is likely to play the role of Coordinator. He is enthusiastic and goal-oriented. He listens to the views of others and emphasizes communication. Although he can make his own views known, his commitment to objectives is likely to be team focused. In part because of his lack of a competitive drive to win or to insist on his own views, the president is not likely to play the role of Shaper. He is unlikely to force progress in difficult situations or when parties are in disagreement, so he must rely on other methods or other members of the team to move the group ahead.

Table 4-33
President Two: Team Types

Type		Sten Score
TT1	Coordinator	8
TT2	Shaper	2
TT3	Innovator/plant	8
TT4	Monitor-evaluator	8
TT5	Resource investigator	4
TT6	Completer	6
TT7	Team worker	6
TT8	Implementer	8

The president is also likely to serve in the role of Innovator/Plant, generating ideas and imaginative approaches. However, he is less likely to serve as the Resource Investigator. He is more likely to leave to others the role of seeking resources and appropriate contacts needed to carry out ideas and plans.

In the role of Monitor-Evaluator, President Two promotes an objective decision-making process, encouraging examination of the pros and cons of ideas presented to the team. The president is likely to monitor his own ideas and to present only those that have survived his own critical analysis. The president also plays the role of Implementer, ensuring that ideas are converted to action plans. However, the president is moderately likely to serve as a Completer, the team member who is concerned with all the details and who sees the project through to the end.

Finally, he is somewhat inclined to serve as the Team Worker, promoting harmony and assuring that everyone's views are heard. His willingness to play this role makes him more attentive to the group's interests and needs when critically evaluating plans and proposals than is typical of Monitor-Evaluators generally.

In his interview, the president indicated that he is comfortable working with teams and sees himself as the college's team leader. He likes college teams to be as self-directed

as possible, including his executive team. As the college's team leader, the president works through the leadership council. His said that his role is to make recommendations, not decisions. Most decisions come through governance rather than through him. He needs the support of the leadership council for his recommendations to receive consideration.

He also said that he embraces shared leadership; he has learned it takes lots of leaders to be effective. He has high expectations. He sets high standards and then gives people room to meet those standards. He tries to provide resources that individuals and teams need to meet expectations. He serves as a change agent for continuous improvement.

He works closely with the vice presidents; he is influenced by their views and is open to changing his own views based on input from others. He meets with the vice presidents every week for four hours. This team addresses all issues of the college. The team builds the meeting agenda, and the meetings are conducted according to a set of ground rules for discussion and taking action. In their discussions, all team members are expected to represent not only their own areas but also the whole institution. The results of their meeting are written and put on the college's internal website by the same afternoon. The Vice Presidents then have their team meetings the following day.

The president also talks with and meets with the vice presidents and other senior leaders at other times as needed; occasionally he attends their team meetings. He also has many individual discussions with employees throughout campus getting input and learning about the needs of the college.

The senior leaders were grouped in the three ranges and results are displayed in Table 4-34. The president's scores are also displayed. The senior leaders tended to score in the medium range on the Team Type scale. Five scored in the medium range as Monitor-Evaluators. For five other team types, 50% scored in the medium range. Three scored high as Coordinator. The group is somewhat less likely than the president to use the Innovator/Plant role. They are much less likely than the president to use the Monitor/Evaluator or Implementer roles.

Table 4-34
College Two Senior Leaders Team Types

		Senior Leaders Sten Score Range						President's
Team Type		Low (1-4)		Medium (5-6)		High (7-10)		Range
TT1	Coordinator	1	16.67%	2	33.33%	3	50.00%	High
TT2	Shaper	2	33.33%	3	50.00%	1	16.67%	Low
TT3	Innovator/Plant	1	16.67%	3	50.00%	2	33.33%	High
TT4	Monitor-Evaluator	1	16.67%	5	83.33%	0	0.00%	High
TT5	Resource Investigator	2	33.33%	2	33.33%	2	33.33%	Low
TT6	Completer	3	50.00%	3	50.00%	0	0.00%	Medium
TT7	Team Worker	1	16.67%	3	50.00%	2	33.33%	Medium
TT8	Implementer	2	33.33%	3	50.00%	1	16.67%	High
	Total	13	27.08%	24	50.00%	11	22.92%	

Intervening Variables

A final area of inquiry that may affect implementation of CQI concerns the presence of intervening variables. These include presidential commitment and involvement, follower commitment, training, management of change, and reaction to external events that may affect the college. President Two was primarily responsible for bringing CQI to the institution, and he has been involved continuously. In addition to his on campus involvement, the president serves as a leader in state, regional, and national

CQI movements. He and his institution have taken the lead in using the Baldrige Criteria for regional accreditation.

The president also began involving employees in the process immediately, although he was sensitive to the views of skeptics. He indicated that he began introducing the ideas of CQI immediately after becoming president. He was aware that there would be resistance and that people would fear that change might be forced upon them. Therefore, he took a year to develop awareness, to present ideas, and to allow for academic debate. He made participation voluntary, and it remains voluntary over 10 years later. His approach was to encourage individuals and groups to try the ideas, to learn about them while the college supported their attempts. He used training and information as key elements to gain commitment.

College Two developed a 5-year Continuous Quality Improvement Implementation time line almost immediately after President Two arrived at the institution. The president worked closely with the director of staff development and organizational learning, who reported directly to him at that time. The president added the role of organizational learning to the staff director's position and they developed an implementation plan. The first year was one of providing information and training. The second year began with the formation of the Quality Steering Team. During the second year there were more information sessions and numerous training sessions. President Two made presentations to departmental faculty groups and was involved at all levels.

By the end of year 2 of the 5-year implementation plan, the Quality Steering Team had selected three process improvement teams, and they began working on their goals and plans of action. Training and process development continued in year 3. A

review process at the end of year 3 was used to evaluate training, implementation, and overall climate to date. Training, review, and revision continued during years 4 and 5; the primary emphasis during those years was on development of additional cross-functional process improvement teams, on team building, and on systems development.

As the college began to measure and benchmark, some departments resisted. The president realized that CQI concepts are more easily implemented in the business and service areas of a college and that the business culture and terminology of TQM and CQI are more likely to be resisted in academic areas. President Two was willing to move slower in the academic areas. He also allocated resources to provide training. To initiate a breakthrough with faculty, the president enlisted an individual outside the institution to work with faculty. The trainer conducted 4-day workshops twice a year with follow-up sessions scheduled after each workshop.

These workshops were designed to assist faculty with understanding the concepts and how they could be implemented in the classroom with their students. The college supported these workshops for 5 or 6 years. One result was that over 200 of the 300 plus faculty were trained in quality learning concepts. The emphasis was to understand the concepts and to try the ideas. Some did not work in the classroom and were discarded. The successful approaches are now incorporated into a year long orientation/training program for new faculty. These concepts include both effective teaching methodologies and strategies for getting students more actively involved in their learning.

Support for and use of CQI in various academic departments is still somewhat uneven because the program is still voluntary, but use has spread. Because CQI is now more a part of the culture, discussions and implementation continue to occur without

specific initiatives. Processes such as measuring results, doing surveys, and using data are part of the overall structure of the college, and these processes provide tools and approaches that can be used in the classroom.

A variety of kinds of training have been used since CQI was first introduced. In the first year, personnel from a college already involved in TQM came to campus. Some of these leaders trained those who would become trainers at College Two. Training also included a course in quality education and one in process improvement. The college has also provided team training and focus group training. As the college's efforts in CQI became more integrated into all the college's processes, training has tapered off. It is still necessary for new employees, but even that training can now be less formal because of the overall change in culture. The emphasis now is on sustainability and just in time and special training.

College Two joined the Continuous Quality Improvement Network in 1994, the fourth year of their 5-year plan. In addition to the president's involvement with CQIN, teams of employees attended the summer institutes sponsored by CQIN. After each institute, the college teams worked to implement the principles learned at the institute. For example, the1995 summer institute featured presentations by employees of the Ritz Carlton, which had just won the Baldrige. A college team was sent to learn about the Ritz Carlton's customer training program. Upon return, this team helped the college develop its own five-star customer-training program. In 1998 Motorola University presented a program on curriculum design. College Two faculty attended. When they returned, they helped to redesign the curriculum approval process to emphasize design and assessment rather than course approval. In 1999 a group went to Saturn where the emphasis was on

self-directed work teams and unions working with management. Upon return, the college initiated three pilots of self-directed work teams; the president's goal is to move to more self-directed or self-managed work teams. The 2000 CQIN Summer Institute was held at Disney World where the teams learned about people management, institutional culture, and defining core values. In 2001, the institute visited Southwest Airlines, the Container Store and other nationally recognized companies in Dallas to learn about core values and values driven leadership. For the last 2 years College Two teams combined what they learned and reduced the college's own core values from 16 to 6 at a retreat. The college is now working on ways to incorporate values into daily decisions.

Over the past 10 years, there have been changes that have affected the college. President Two does not believe in abandoning the principles of CQI in difficult times. In fact, these processes are needed even more in times of difficulty and crisis. For example, College Two began its Quality journey in the early 1990s. When a recession began in 1992, fiscal resources dried up. The college received no increase in funding from 1992-1996 yet had to honor a union agreement that required an 18% faculty salary increase over a 3-year period. The College was able to use the processes of CQI to gather and evaluate data and to make decisions based on that input rather than on personal views or convenience.

Challenges also occur in prosperous times. Tremendous enrollment growth in the 1990s resulted in significant numbers of new hires. The college had to adjust its training and knowledge sharing to inform and train large numbers of new faculty and staff serving key functions in the institution.

President Two also has found that the principles of CQI can work effectively in a governance structure that involves bargaining with three unions. If a union is committed to interest-based bargaining and has been trained in that method, the fit with quality improvement is easy and natural. If, however, union leaders take an adversarial or positional bargaining approach, the fit is difficult. Time and training are required in those circumstances. A recent change in union leadership has brought this challenge. When union leaders began to question every decision and how or why money was spent on activities and travel relating to implementing CQI, the college took the union leaders along to conferences to have them learn about the principles and decision-making processes.

Another state organizational mandate includes having strong academic senates that deal with professional and academic matters. The president has had good relationships with this group, but it has required a modification in the CQI structure, since this group makes decisions that might otherwise be made through other college processes. The statement that describes the function of the College Leadership Council reflects this variation.

> On Academic and Professional matters, this body will take no formal action but will be provided the opportunity to review and discuss these matters. On other than Academic and Professional matters, this body will serve as an advisory group to the College President. (college website)

The president identified a current leadership challenge as being able to sustain commitment and learning over time in a rapidly changing organization. He indicated that continuous leadership is necessary, and that implementation of CQI takes 10 to 15 years. However, the process never stops; it is a journey, not a program. It is as hard to sustain the commitment as it is to implement it. In addition, the president's job has become more

difficult, more political. Many consider a community college presidency now less desirable than it was in the past in part because of groups and coalitions vying for power and persuasive influence.

The President believes that the institutional climate has changed in College Two. The college is even more focused on students and the other stakeholders they serve, and continuous improvement is now widely accepted as a value. In addition to the quality that has always been a part of the institution, a willingness to change and to benchmark against others are seen as healthy endeavors. The college is always looking for places to compete and finds itself doing very well. Examples include success in state and national competitions and in national grant acquisitions. Benchmarking also gives them the feedback to determine where they still have work to do.

Cross-Case Analysis

This section uses the information from the two case studies to answer the research questions. The conclusions reached suggest a theoretical construct for successful leadership in a college using CQI. In case study research, results cannot provide statistical generalizations to verify external validity. Rather, case studies address analytical generalizations. The particular set of results can be generalized to present a broader theory (Yin, 1994). The cross-cases analysis is organized according to the research questions.

Situational Variables

Is there a difference in the situational variables in colleges with similar levels of implementation of CQI?

For this study, the situational variables examined were those identified in the literature (Entin, 1994; Hammons, 1994; Horine & Hailey, 1995) as most likely to affect implementation of CQI. The variables are motivation for adopting CQI, organizational structure and culture of the institution, time for implementation, and personal factors of the leaders.

The survey results and the interviews with the presidents indicated that motivation for beginning CQI at both institutions was similar. Both presidents wanted to improve colleges that were already considered successful colleges. Neither implemented CQI as a response to a serious problem or crisis in the institution. This was true of all 15 colleges in the original study. Responses indicated that all of the institutions wanted to improve rather than solve a crisis. However, College Two did experience a serious financial challenge in the early years of implementation. Implementation of CQI involves a substantial commitment of time and resources (Entin, 1993). In the recession of the early 1990s, College Two received no budget increases yet had to meet a commitment to a union agreement that provided 18% salary increases over a three-year period. President Two was immediately challenged with maintaining support for the resources needed to begin training and implementation of CQI at the same time that he had to find ways to provide funds for the union agreement.

Based on the review of internal documents, the surveys, and the interviews with the presidents, the organizational structures of the colleges were determined. Although both campuses serve under elected boards, the colleges differ in other areas. College One is part of an urban, multi-campus district, and its leaders are subject to district policy; College Two is a single-campus district that serves a vast geographic area; state law

specifically mandates a governance structure that the college must follow. Unions do not represent College One faculty and staff, so the college does not have to address formal bargaining procedures. Three unions represent the faculty and staff of College Two, so formal bargaining is an integral part of the governance structure.

Despite the formal organizational differences in these colleges, both presidents have nurtured cultural climates that encourage broad-based participation. Employees in all areas of both colleges are involved in continuous improvement. Both presidents are committed to empowering others; they have embraced the concept of leadership in which leaders and followers exert mutual influence. Cross-functional teams and horizontal work structures permeate both organizations.

Implementation of CQI at College One began with a president who had served as the college's president for 12 years, and he had worked at the college since its beginning. He had already had extensive involvement in shaping the organization and culture of the college before he began implementing CQI. President Two had 10 years' experience as a president when he began implementing CQI. However, he was new to College Two. He began implementation in a culture that existed when he arrived. Both schools have continued their quality journeys through economic downturns, personnel turnovers, and other changes. Both colleges have been committed to CQI for at least 10 years; both presidents have been involved for at least 10 years.

Both presidents are white males in their fifties, each with over 20 years of leadership in education. President One has spent most of his career in his current institution, but President Two was an administrator and president at other institutions and in other parts of the country before accepting the presidency at College Two.

These two schools exhibit many differences in situational variables, yet both presidents were able to implement CQI successfully. Neither institution, however, was considered to be in crisis or to have organizational or financial problems, conditions considered unfavorable to CQI implementation (Entin, 1994).

Personality Attributes

Is there a difference in the personality attributes of members of the senior leadership teams in colleges with similar levels of implementation of CQI?

The OPQ includes 30 different attributes of personality that are grouped in three domains: Relationships with People; Thinking; and Feelings and Emotions. Table 4-35 compares the attribute scores of the two presidents.

Overall, on the 30 attributes, the presidents' scores match exactly on seven attributes and within one score on another six attributes (43%). They also match on the social desirability attribute. Their scores are within two sten scores (three if a score of 10 is involved) on another 8 attributes (27%). They differ on 9 attributes (30%).

In the Relationships with People domain, scores for the two presidents match exactly or nearly on 4 of the 9 attributes: Independent (7 and 7), Outgoing (1 and 1), Socially Confident (5 and 4), and Modest (8 and 7). In the Thinking domain the presidents match exactly or nearly on only 2 of the 11 attributes: Traditional (4 and 5) and Change oriented (9 and 9). In the Feelings and Emotions domain, the presidents match on 7 of the 10 attributes: Relaxed (9 and 9), Worrying (2 and 2), Tough-minded (6 and 5), Optimistic (8 and 8), Critical (7 and 7), Competitive (3 and 4), and Decisive (6 and 5). In addition, the two presidents match on the social desirability attribute (8 and 8). The presidents match the least in the Thinking domain and the most in Feelings and Emotions.

Table 4-35
Comparison of Presidents' OPQ Personality Attributes

Matching Attributes				Within Range				Differing			
	President	One	Two		President	One	Two		President	One	Two
	Relationships with People				Relationships with People				Relationships with People		
R3	Independent	7	7	R2	Controlling	3	5	R1	Persuasive	3	6
R4	Outgoing	1	1	R8	Democratic	10	7	R5	Affiliative	7	3
R6	Socially Confident	5	4					R9	Caring	10	6
R7	Modest	8	7								
	Thinking				Thinking				Thinking		
T5	Traditional	4	5	T1	Practical	4	2	T2	Data Rational	1	7
T6	Change Oriented	9	9	T3	Artistic	10	7	T9	Forward Planning	3	8
				T4	Behavioral	9	7	T10	Detail Conscious	3	8
				T7	Conceptual	7	10				
				T8	Innovative	8	6				
				T11	Conscientious	4	6				
	Feelings and Emotions				Feelings and Emotions				Feelings and Emotions		
F1	Relaxed	9	9					F4	Emotional Control	3	9
F2	Worrying	2	2					F7	Active	6	3
F3	Tough-Minded	6	5					F9	Achieving	4	7
F5	Optimistic	8	8								
F6	Critical	7	7								
F8	Competitive	3	4								
F10	Decisive	6	5								
D1	Social Desirability	8	8								

The following analysis addresses the relationship of the presidents' scores to the way the presidents function in their CQI institutions. In the domain of Relationships with People, both presidents scored somewhat high (7) for Independent. This score suggests these men are willing to share their ideas, even if their views are unpopular, and they may take action even when others disagree. Successful implementation of CQI requires the involvement and commitment of the president (Fisher, J. L., 1993; Gratton, 1993;Seymour, 1992); the president provides the vision and leads the institution in change, activities that are consistent with the attribute of Independence. Atypical of others who score high on Independent (Saville & Holdsworth, 1996), these two leaders also scored high on Democratic, although President One scored higher (10) than President Two scored (7). Thus, their tendency to be independent is no stronger than their tendency to encourage others to participate and to adopt group decision-making. Both presidents also scored high on Modest, indicating they are egalitarian; they minimize emphasis on status and on their own achievements. Continuous Quality Improvement also requires the development of cross-functional teams. The process encourages all individuals to participate and share their ideas and also encourages group support and group credit. All individuals are responsible for continuous improvement (Deming, 1986; Crosby, 1998; Juran, 1992). Leaders who relate to others using democratic principles and who are egalitarian in their approach are likely to reduce fear among others and to increase participation in decision-making. When interviewed, both presidents acknowledged their lead role in introducing CQI, but they also stressed the need to empower others and to promote widespread participation in leadership and in decision-making.

Of the 20 senior leaders who participated in the study in the two institutions, 15 also had a high score on the Independent (R3) attribute. See Table 4-36. Most also scored in the medium to high range on Modest (R7) and Democratic (R8). Of the 20, only 4 scored low on the Modest Attribute and 3 scored low on the Democratic Attribute.

Both presidents scored 1 on Outgoing, indicating both presidents are quiet and reserved and do not seek the limelight. Both scored in the midrange on Socially Confident, indicating they are somewhat uneasy in new situations. While neither president thinks of himself as shy or inhibited, neither seeks attention. This, too, is consistent with principles of CQI. High scorers on Outgoing may become the center of attention. Both presidents emphasized the importance of shared leadership, listening to others, and encouraging self-directed teams; that is, they minimize the importance of the single leader, stressing instead the importance of each individual's role in leadership. Organizational structures at both institutions reflect the importance of teams and of shared leadership.

Of the 20 senior leaders, most scored in the medium range on Outgoing (R4). Only 3 scored in the low range with the presidents. Both teams' members most often scored in the medium to high range on the Socially Confident (R6) attribute. Their scores are higher than the presidents' scores. As a group, they are somewhat likely to enjoy the limelight and to be extroverted. They are comfortable with new situations, with putting people at ease, and with giving presentations. Although there are individual exceptions, generally the senior leaders are confident in their abilities to present before groups and to put others at ease.

Table 4-36
OPQ Personality Attributes of Senior Leaders

	College One														College Two					
R1	2	5	6	1	5	5	7	5	7	5	6	3	5	6	7	6	4	6	6	4
R2	7	7	8	1	7	8	4	5	6	6	8	3	4	4	6	6	6	7	6	6
R3	7	9	8	6	10	8	7	6	9	9	8	8	4	5	7	7	7	7	7	4
R4	5	7	6	1	6	8	6	7	6	5	8	8	1	5	4	7	6	7	6	5
R5	7	3	8	1	5	8	4	9	4	6	9	6	4	5	3	7	7	7	5	7
R6	5	5	8	1	5	10	5	7	6	8	8	6	4	7	2	8	6	7	8	7
R7	9	2	9	7	8	5	7	6	5	5	1	8	8	8	9	4	7	4	7	7
R8	7	7	6	1	3	6	8	6	6	8	6	3	6	6	6	7	5	5	8	6
R9	7	9	7	1	8	7	7	6	5	7	8	6	8	5	8	7	5	5	4	5
T1	4	1	2	1	1	8	1	3	7	9	7	7	5	6	3	3	6	6	6	7
T2	5	4	7	9	6	5	6	6	9	8	10	2	5	5	5	2	7	6	4	8
T3	6	8	6	7	2	9	9	5	5	3	5	9	5	6	7	7	7	3	8	5
T4	6	8	7	3	8	7	5	6	6	8	6	8	7	4	5	8	4	3	7	9
T5	5	5	5	3	10	3	5	5	5	9	7	3	10	4	4	8	2	7	6	9
T6	8	6	6	6	5	8	6	9	8	9	7	6	3	6	7	8	7	6	5	4
T7	8	7	6	4	6	10	5	5	9	1	10	10	7	8	1	6	4	4	4	6
T8	6	8	7	2	7	6	5	3	9	6	8	8	5	5	10	8	8	5	7	5
T9	9	6	8	2	7	6	1	3	7	7	9	6	8	6	9	9	6	5	8	7
T10	9	6	9	3	5	3	4	5	7	9	8	8	8	4	4	8	4	2	3	5
T11	5	5	10	2	8	3	2	6	4	8	8	5	9	4	7	5	5	3	6	4
F1	7	6	7	3	5	9	2	6	6	8	7	6	6	7	9	8	5	5	8	6
F2	9	6	4	9	6	2	8	6	1	5	4	6	5	4	2	3	4	7	4	6
F3	5	7	6	4	6	5	6	6	8	9	6	4	6	7	4	5	3	4	7	8
F4	5	3	8	8	4	4	5	2	6	5	3	4	9	8	4	3	4	4	4	5
F5	7	7	8	5	5	9	6	6	4	8	7	7	8	5	8	7	5	6	4	7
F6	2	8	7	6	9	10	10	5	10	7	9	7	5	5	8	6	4	6	7	4
F7	8	2	5	4	5	8	6	8	2	5	4	6	9	6	5	8	8	6	7	6
F8	3	5	5	4	6	3	7	5	6	4	4	4	7	5	3	4	6	5	6	4
F9	8	4	4	5	5	8	6	4	6	4	6	2	4	4	7	6	4	5	5	6
F10	5	7	7	9	5	5	2	5	8	4	7	6	5	5	9	5	9	8	7	3
D1	9	4	7	3	4	6	4	3	5	10	5	6	6	6	5	7	6	4	5	9

In the Thinking domain, the two presidents scored in the high range on the Artistic, Behavioral, Change-Oriented, and Conceptual attributes. Both presidents expressed an interest in the arts and in cultural and creative activities. Both presidents enjoy analyzing and understanding their own thoughts and motives as well as the behaviors of others. Conceptual thinkers acquire knowledge quickly and enjoy working

with complex and theoretical ideas. The high score on the Change-Oriented attribute indicates that the presidents like new activities and are comfortable with change. The Behavioral, Change-Oriented, and Conceptual attributes are consistent with implementing a new institutional system such as CQI, with introducing change, with empowering others, and with maintaining a system that is continuously changing.

The presidents scored in the medium range on Traditional, indicating a balance between introducing change and supporting the traditional. When interviewed, both presidents displayed sensitivity to those who resist change and who are uncomfortable with the unknown. Both had adjusted their implementation of CQI to account for these individuals or groups. Although they were committed to CQI, they found ways of introducing the concepts and changes either voluntarily or with considerable investment in providing the appropriate knowledge and experience to make the change more understandable and less threatening.

Of the 20 senior leaders, 17 also scored in the medium to high range on Artistic (T3). At least 70% of the senior leaders, 15 and 14 respectively, scored in the medium to high range on Behavioral (T4) and Conceptual (T7). However, 33% in College Two scored low on the Behavioral attribute. The majority of senior leaders at College One match the presidents' high scores on Conceptual, but at College Two, where the president scored a 10 in this area, the majority (67%) scored in the low range and the other 33% scored in the medium range. As a group, the senior leaders are somewhat less likely than the presidents to engage in studying the behavior of others or in theoretical thinking, but they clearly have some preference for these attributes.

At both colleges, the senior leaders were fairly evenly distributed in their scores on Traditional (T5), 7 high, 7 medium, and 6 low. At College One, over 70% have a medium to high preference for Traditional and at College Two, 67% have a medium to high preference for Traditional. In contrast, only 2 senior leaders scored low on the Change-Oriented (T6) attribute; the rest had a medium to high score indicating their interest in change. The presidents' scores on the Traditional and Behavioral attributes and their statements in their interviews indicate that they are sensitive to and able to cope with these differences in their team members as well as others in the college.

The presidents did differ on three attributes that seem important to an organization committed to the principles and assessments of CQI, and particularly to alignment with the Baldrige Criteria. They are the Data Rational, Forward Planning, and Detail Conscious attributes. President One scored in the low range on all three, and President Two scored in the high range. A high score on these attributes is consistent with the emphasis on use of data, planning, and assessment in CQI. President One indicated that he has come to have a reluctant respect for data although he gets no particular satisfaction from dealing with it. He has learned the skill of using data, but he monitors its use, preferring that decisions be data influenced rather than data driven. President One is much less likely to be involved in planning or to be involved in the details of a plan than President Two. A continuous improvement organization requires careful assessment and planning processes. President One indicated that over the past 20 years he has empowered others and has delegated many responsibilities. He said that he is much less involved in these activities than he was in the past. The profiles of the 14 senior leaders in College One indicate that 12 have a moderate to high preference for the Data Rational

(T2) attribute and 10 have a moderate to high preference for the Forward Planning (T9) and Detail Conscious (T10) attributes. Thus, the president can rely on the interests and abilities of other college leaders in these areas.

In the domain of Feelings and Emotions, the presidents' scores are similar on 7 of the 10 attributes. They both scored high on three attributes: Relaxed, Optimistic, and Critical. They scored in the mid-range on Tough-Minded and Decisive, and in the low range on Worried and Competitive. Both presidents feel it is important to lead by example; both expressed great optimism and confidence in their quality journeys. In an atmosphere of continuous assessment and change, relaxed, optimistic leaders are an asset. The relatively high scores on Critical indicate that both presidents tend to be able to probe the facts and to evaluate ideas and events critically. Both presidents indicated that assessment feedback is often difficult to deal with. Acknowledging weaknesses and resolving to continue to improve require relaxed but somewhat tough-minded leaders. Neither president is particularly competitive. Both expressed a desire to develop self-directed teams and to involve all members of the community in decision-making. Their emphasis on being involved rather than being extremely competitive promotes this philosophy. Both presidents commented on the process of benchmarking, on continuous assessment, and on getting feedback from external reviews such as state or national Baldrige-based awards. Because there are always areas to improve, because CQI is a journey, it is best not to be a worrier and to be optimistic. In addition, the goal is not to compete and win but to improve; therefore, a highly competitive individual might not withstand the continuous assessment and feedback as well as a leader with a lower level of competitiveness.

All except two of the senior leaders scored in the medium to high range on Relaxed (F1), revealing a trend similar to the presidents although not as high. They also tend to score low or medium on Worrying (F2). Both groups also share the presidents' tendencies to be Optimistic (F5) with only one person at each college scoring in the low range. As a group, the senior leaders seem well suited to the demands of CQI in terms of the Optimistic and Relaxed attributes. These leaders also tend to be moderate or low in their competitiveness.

College One leaders tend to match the presidents on Critical (F6) and Tough-minded (F3), but the leaders at College Two scored lower on these attributes. The senior leaders in College One most often fall in the high range with the presidents on the Critical (F6) attribute, but at College Two the senior leaders score equally across the range on Critical. College One senior leaders fall in the medium range with the presidents on being Tough-minded (F3), but half of those at College Two are in the low range.

Both presidents scored high (8) on the Social Desirability (D1) attribute indicating they are usually cheerful, even in difficult times, that they do things well, give their attention to others, are not envious of others, and rarely lose their tempers or regret what was done in the past. However, the senior leaders in College One scored in the medium (43%) to low (36%) range, and in College Two in the medium (40%) to high (33%) range on Social Desirability.

Leadership Styles

Is there a difference in the leadership styles used by leaders in colleges with similar levels of implementation of CQI?

Table 4-36 compares the presidents' Leadership Styles scores.

Table 4-36
Comparison of Presidents' Leadership Styles

Style		President	
		One	Two
LS1	Directive	1	6
LS2	Delegative	4	6
LS3	Participative	8	4
LS4	Consultative	8	5
LS5	Negotiative	4	6
AD1	Adaptability	10	9

Despite similar scores on 21 of the 30 personality attributes, the presidents differ in their application of those attributes in leadership situations. The presidents display differences on all five of the leadership scales. President One is likely to use the Participative and Consultative leadership styles most frequently and is most unlikely to use the Directive style. He is moderately unlikely to engage in the Delegative or Negotiative styles. President One indicated that his leadership style has changed over the years. He indicated that it his practice to seek out ways to hear as many varied voices as he can, to get as much participation as possible. He also indicated that he used to be more of a micromanager. Now he is less involved in the processes. He has learned to trust others and their work. He also indicated that he used to be more of a delegator than he was a consensus builder. As his profile suggests, now he is more interested in participative leadership, in building consensus; he wants to make sure that everyone's views are heard and that the eventual decision is one agreed upon by the group as a whole. His leadership profile indicates that as a Consultative leader he will gather opinions from others but will tend to make the decisions himself. However, the president said that rather than addressing problems in his role as the president, he prefers to teach individuals how to fix problems on their own.

The situational variables at College One may allow the president more choice in his leadership style. He has influenced the college as its president for 20 years; he has hired all of the current leaders and has not had to cope with unions or other formal structures other than the Board of Trustees and the District Office, both of which support quality concepts. The president also indicated that he is quite willing to use different approaches with different people, based on what works best for that individual. His score of 10 on Adaptability supports that tendency.

President Two has a tendency to use all of the styles, but he is slightly less likely to use the two styles preferred by President One. As a Directive leader, he may plan a group's work in advance, but he is unlikely to monitor closely once work is underway. He may also seek others' views and then delegate according to the approach he thinks will work best with the people involved. He is also able to serve as a Negotiative Leader, looking for incentives and modifying approaches to achieve success. President Two's interest in human nature and in understanding the motives and values of others influence his choice of leadership style in a particular situation. Like President One, President Two scored high on the Adaptability scale, indicating the ability to use different styles according to the situation. The situational variables in College Two may contribute to the president's use of a variety of styles. For example, President Two might use the Participative or Consultative style when interacting with his leadership team but may be more likely to negotiate or be directive when interacting with unions or within the formal state-mandated structures. When interviewed, President Two discussed several leadership approaches. Overall, the president embraces the Servant-Leader philosophy. His responsibility is to do whatever it takes to achieve the college's mission, to move

forward, and to support staff. He is particularly interested in symbolic leadership and in how powerful certain symbols are to individuals or groups of individuals. He also recognizes that current leaders must have really good political skills. President One serves a large, single-campus institution with a variety of programs and services and a diverse student body. He must also contend with employee unions and state political structures, so his ability to use all the styles serves him well in his situation.

As a group, the senior leaders in each college do not closely match their presidents in the use of Leadership Styles. See Table 4-37 for College One and Table 4-38 for College Two. The president's ranges are in the last column.

Table 4-37
Leadership Styles in College One

Senior Leaders in Sten Score Range								President
		Low (1-4)		Medium (5-6)		High (7-10)		One
Style		#	Percent	#	Percent	#	Percent	
LS1	Directive	6	42.86%	3	21.43%	5	35.71%	Low
LS2	Delegative	6	42.86%	5	35.71%	3	21.43%	Low
LS3	Participative	3	21.43%	7	50.00%	4	28.57%	High
LS4	Consultative	4	28.57%	6	42.86%	4	28.57%	High
LS5	Negotiative	3	21.43%	11	78.57%	0	0.00%	Low
	TOTAL	22	31.43%	32	45.71%	16	22.86%	
AD1	Adaptability	1	7.14%	6	42.86%	7	50.00%	High

At College One, most of the senior leaders (11 of 14) are moderately likely to use the Negotiative style when leading, a style their president is less likely to use. Only 28% are highly likely to use the Participative and Consultative styles, their president's most preferred styles.

The majority of leaders at College Two do match their president on Directive and Consultative, and half match on Delegative. Consultative leaders are strongly inclined towards group work and the involvement of all group members in decision-making, but

unlike Participative leaders may not always strive for consensus, preferring instead to trust their own analysis.

Table 4-38
Leadership Styles in College Two

Senior Leaders in Sten Score Range								President
		Low (1-4)		Medium (5-6)		High (7-10)		Two
Leadership Style		#	Percent	#	Percent	#	Percent	
LS1	Directive	1	16.67%	4	66.67%	1	16.67%	Medium
LS2	Delegative	3	50.00%	3	50.00%	0	0.00%	Medium
LS3	Participative	0	0.00%	4	66.67%	2	33.33%	Low
LS4	Consultative	0	0.00%	5	83.33%	1	16.67%	Medium
LS5	Negotiative	3	50.00%	3	50.00%	0	0.00%	Medium
	TOTAL	7	23.33%	19	63.33%	4	13.33%	
AD1	Adaptability	1	16.67%	4	66.67%	1	16.67%	High

The senior leaders at both colleges tend toward the middle of the scales; 46% of the scores fell into the medium range at College One and 63% were in the medium range at College Two.

Team Types

Is there a difference in the team types used by leaders in colleges with similar levels of implementation of CQI?

Table 4-39 compares the Team Type Scores of the two presidents.

To achieve quality principles, Freed and Klugman (1997) stress the importance of teams and teamwork as well as empowering all levels of employees. Saville and Holdsworth (1996) developed a scale for the eight team types described by Belbin (1981, 2000). Belbin suggested that effective teams include individuals who serve differing roles. Most individuals can play more than one role, sometimes depending on the level of preferences for particular roles of others on the team (Belbin, 2000). This discussion describes the possibility of roles based on the leaders' scores.

Table 4-39
Presidents' Team Types Scores

Type		President	
		One	Two
TT1	Coordinator	5	8
TT2	Shaper	2	2
TT3	Innovator/plant	8	8
TT4	Monitor-evaluator	6	8
TT5	Resource investigator	6	4
TT6	Completer	1	6
TT7	Team worker	9	6
TT8	Implementer	1	8

The Team Type scales indicate that both presidents are likely to serve as the Innovator/Plant when working with a team and that neither president is likely to serve as a Shaper. Teams generally benefit from one strong Innovator. At both colleges, the president can play this role. The Innovators are often the source of creativity and resourcefulness. Neither president is likely to be the Shaper, the person who inspires action to achieve objectives by whatever means necessary. Well-developed teams are unlikely to benefit greatly from Shapers (Saville & Holdsworth, 1996, Section10, p. 9). President One is highly likely to play the role of Team Worker (sten score 9), and President Two may play that role at times (sten score 6). As Team Worker, the presidents are likely to use their sensitivity and caring attributes to keep the team functioning and to minimize interpersonal problems among team members. The presidents differ sharply on the Implementer scale and on the Completer scale. President Two scored in the high range on Implementer and medium range on Completer, and President One scored a one on both of those scales.

The senior leaders at both schools exhibited a great deal of diversity in the team roles that they are likely to play. See Table 4-40 for College One and Table 4-41 for

College Two. The greatest benefit of studying team roles is to determine how the senior leaders complement their presidents.

Table 4-40
Team Types in College One

Senior Leaders in Sten Score Range								President
		Low (1-4)		Medium (5-6)		High (7-10)		One
	Team Type	#	%	#	%	#	%	
TT1	Coordinator	4	28.57%	5	35.71%	5	35.71%	Medium
TT2	Shaper	2	14.29%	7	50.00%	5	35.71%	Low
TT3	Innovator/Plant	3	21.43%	6	42.86%	5	35.71%	High
TT4	Monitor-Evaluator	0	0.00%	4	28.57%	10	71.43%	Medium
TT5	Resource Investigator	3	21.43%	6	42.86%	5	35.71%	Medium
TT6	Completer	4	28.57%	4	28.57%	6	42.86%	Low
TT7	Team Worker	2	14.29%	9	64.29%	3	21.43%	High
TT8	Implementer	5	35.71%	3	21.43%	6	42.86%	Low

Table 4-41
Team Types in College Two

Senior Leaders in Sten Score Range								President
		Low (1-4)		Medium (5-6)		High (7-10)		Two
	Team Type	#	%	#	%	#	%	
TT1	Coordinator	1	16.67%	2	33.33%	3	50.00%	High
TT2	Shaper	2	33.33%	3	50.00%	1	16.67%	Low
TT3	Innovator/Plant	1	16.67%	3	50.00%	2	33.33%	High
TT4	Monitor-Evaluator	1	16.67%	5	83.33%	0	0.00%	High
TT5	Resource Investigator	2	33.33%	2	33.33%	2	33.33%	Low
TT6	Completer	3	50.00%	3	50.00%	0	0.00%	Medium
TT7	Team Worker	1	16.67%	3	50.00%	2	33.33%	Medium
TT8	Implementer	2	33.33%	3	50.00%	1	16.67%	High

In College One, 6 of the 14 individuals are highly likely to play the role of Completer, and 6 are highly likely to play the role of Implementer. These are areas where the president scored low (sten score 1). In College One, 10 of the 14 senior leaders did score in the high range for the role of Monitor-Evaluator and 9 were in the medium range as Team Worker. But the rest of the scores were widely distributed from low to high on the other six team types. This is the kind of diversity that President One indicated that he

values and that helps all of his leaders experience a variety of approaches and views. President One's high score as Team Worker makes him well suited to coordinate a team of this type.

In College Two, individuals tended to score in the medium range for most of the team types whereas the president scored in the high range on half of them. In College Two, only one senior leader is highly likely to play the Shaper role, although three others also have a moderate tendency to do so. President Two is not likely to be the Resource Investigator, but two of his six team members are highly likely to play that role. The president is likely to be the Implementer; only one senior leader scored high in that role. None of the senior leaders is likely to be the Monitor-Evaluator or the Completer. The president is highly likely to be the Monitor but only moderately likely to be the Completer. Three senior leaders are also moderately likely to be the Completer.

Intervening Variables

Is there a difference in the intervening variables affecting CQI implementation in colleges with similar levels of implementation of CQI?

The intervening variables include presidential commitment and involvement, follower commitment, training, management of change and reaction to external events that may affect the college.

Both presidents provided the vision for implementing CQI and both were the catalysts to start planning and implementation. Both presidents are strongly committed to the concepts and continue to be directly involved in continuous improvement.

Both presidents have provided extensive training and opportunities for individuals to learn about and practice CQI principles through workshops and training sessions. Both presidents also indicated that they have adapted the use of training to fit the situation.

Both prefer to offer training as it is needed for specific areas rather than to have formal requirements, and both adjust the emphasis on training to meet the needs of new and current employees.

Although both continue to be involved, both also stressed that the responsibility for continuous improvement belongs to all members of the college community. President One indicated that all employees share the responsibility for continuously improving their areas of primary responsibility. President Two stressed the importance of self-directed teams in the CQI structure.

President One indicated that the college is learning to address priorities and changes in internal and external conditions based on the colleges Key Performance Indicators. This disciplined approach keeps the levels of influence where they should be even if budgets or external governance change. President Two has faced more specific external intervening variables than President One has faced. President Two had to honor a union contract that committed the college to implement a 3-year pay increase, and he has had to address specific legislative mandates regarding governance. He has used the same philosophy as President One; he has continued to use the priorities and outcomes of the CQI process to address these issues. He did have to make some modifications to the CQI structure to accommodate state mandates, but he felt no need to consider abandoning the principles.

This study found both similarities and differences in the situational variables, leadership, and intervening variables in these two institutions recognized for their successes in their quality journeys. Tbe patterns that emerged suggest a set of

circumstances and personal attributes that helped these institutions succeed in their implementation of continuous quality improvement.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions based on the results, compares the findings to the literature, and presents a theoretical construct for leadership in CQI community colleges. The chapter presents implications for practice and recommendations for further study.

The purpose of this study was to develop a theoretical construct for effective leadership in a community college that has adopted or wants to adopt the principles of continuous quality improvement. According to Gall et al. (1996), a theoretical construct is developed by explaining a set of observed phenomena. This study was designed to gather data to explain the leadership of presidents and senior team members of institutions that have demonstrated successful implementation of Continuous Quality Improvement processes.

CQI processes are used to address organizational change and organizational effectiveness. Continuous Quality Improvement encourages educational institutions to refine or redefine missions that have become too broad and that attempt to be all things to all people (Brigham, 1994b; Seymour, 1993b). Continuous Quality Improvement's emphasis on customers requires an institution to address the complaints and expectations of students, parents, employers, and legislators (Brigham, 1994b). Its emphasis on continuous improvement provides an opportunity for organizations to modify overly compartmentalized administrative structures and disconnected academic activities

(Brigham, 1994b; Seymour, 1993b) by empowering individuals and work teams (Marchese, 1993). It encourages training, teamwork, and mutual accountability. It helps institutions to improve performance and to influence faculty reward systems and curriculum. Continuous Quality Improvement principles can be used to develop agile institutions that can respond and adapt quickly to maintain and improve their competitive positions (Godbey, 1993).

Conclusions

This study presented an analysis of leadership in community colleges that have demonstrated success in these types of changes and activities. This study determined the level of implementation of the 1998 Malcolm Baldrige Quality Award Education Criteria for Performance Excellence in member institutions of the Continuous Quality Improvement Network as measured by the Institutional Self-Assessment instrument. Both quantitative and qualitative inquiry methods were used to determine the leadership and team profiles of the presidents and senior team members of those institutions that scored highest on the Baldrige Quality Award Index Rating. The Occupational Personality Questionnaire (OPQ) was used to determine the critical personality attributes, team types, and leadership styles of the presidents and their senior team members. Questionnaires and institutional reports and documents were used to gather information about the situational and intervening variables that are associated with successful implementation of CQI. Semi structured interviews were conducted to further explore the practices of the CEO's and to further understand the organizational structure. To establish construct validity for the case studies, evidence from the multiple sources was organized according to the study's five propositions. Results were reported when similar information from two or

more sources was consistent. Key respondents reviewed the accuracy of their responses. To reduce threats to internal validity, alternate explanations were considered. In addition, Dr. Dale F. Campbell, a qualified SHL Test User, verified the discussion related to the results of the OPQ. The results of the study suggest a number of leadership traits and behaviors important to successful implementation of CQI.

Situational Variables

For the purposes of this study, situational variables are those contextual and organizational conditions that exist within a leadership setting. Researchers (Entin, 1994; Hammons, 1994; Horine & Hailey, 1995) have identified the motivation for adopting CQI, the organizational structure and culture of the institution, time for implementation, and personal factors of the leaders as important situational factors in the implementation of CQI.

None of the 15 institutions in this study was in a crisis situation when it adopted CQI. Motivation for beginning CQI at the two colleges selected for the case studies ws similar. Both were successful institutions that wanted to improve. In both institutions the CEO initiated the move to CQI.

Although neither college was in a crisis situation, the organizational structures and cultures differed somewhat. College One serves about 14,000 credit students each term, and College Two serves about 27,500. College One is part of a multi-campus district. College decisions are made through a line organizational structure, but input is received from those affected by the decisions. College One's culture had already been shaped by the president and was consistent with CQI principles. Many of the values and processes of CQI were already present in the college. At College One, many CQI practices are part of mandatory training and assessment.

College Two is a large, single campus district. Its organizational structure includes state-mandated roles as well as relationships with unions. College Two developed the CQI philosophy within a formal structure that now includes over 30 standing committees and subcommittees. Because of some of the formal contractual agreements, the use of CQI principles by various individuals throughout the college is primarily voluntary, but most employees are involved.

Both institutions have been involved with CQI for 10 to 11 years and have been consistent in their commitment throughout the years. Both presidents said they had moved beyond CQI by focusing on student learning and by shaping their institutions to meet the Baldrige Award Criteria for Education. Both schools have continued their quality journeys through economic downturns, personnel turnovers, and other changes.

Both presidents are white males in their 50s who have extensive leadership experience in the community college. However, President One had been at his institution since its beginning and had been president of the college for 11 years when he introduced CQI. President Two had 10 years of presidential experience at other institutions but began CQI in the first year of his presidency at College Two.

In the colleges studied, the situational factors did not adversely affect the successful implementation of CQI although they did contribute to variations in the ways CQI was integrated into the institutions.

Personality Attributes of Presidents and Senior leaders

The second area of inquiry focused on personality attributes. The Occupational Personality Questionnaire includes 30 different attributes of personality that are grouped into three domains: Relationships with People, Thinking, and Feelings and Emotions. For this study, the two presidents and members of their leadership teams were administered

the OPQ. President One identified 14 individuals who make up his leadership team; all completed the OPQ. President Two identified 9 leaders; 6 completed the OPQ.

This study revealed a number of attributes common to both presidents. These attributes were further explored in interviews with the presidents, in relation to the literature that describes implementing CQI, and in the context of the organizational structure, culture, and characteristics of senior leaders in the colleges.

Analysis of the results of the OPQ, the interviews with the presidents and the case study information revealed several attributes to be important for leaders in a community college that wants to adopt CQI.

In Relationships with People, high levels of the Independent, Democratic, and Modest attributes are consistent with the principles and successful implementation of continuous quality improvement. Both presidents provided the vision and led the institution to change, and both continue to be involved and committed to expanding implementation into new areas such as regional accreditation. Both colleges developed democratic organizational structures that require broad-based participation and group decision-making. Both colleges formally recognize group as well as individual accomplishments throughout the institution, rather than focusing on presidential accomplishments, further indication of the need for a high level of the Modest attribute. In contrast, the president should display a moderate to low level of the Controlling attribute. Both colleges exhibit evidence of empowerment, sharing of control and responsibility, functioning throughout the college. Finally, it is not necessary for the president to be either highly Socially Confident or Outgoing. Although the presidents confirmed these attributes, there was not a strong link of direct evidence to

implementation of CQI. Results do suggest that the lower level of these attributes may contribute to the president's ability to share leadership and to encourage participation, which are processes related to CQI. Numerous examples of shared leadership, self-directed teams, and empowering others were evident in the information collected. The presidents differed in their scores on Persuasive, Affiliative and Caring. Other information collected provided no indication as to whether these attributes are important to CQI implementation.

The scores of the senior leaders in these two colleges are not as closely matched as are the two presidents' scores. However, as a group, the senior leaders also scored high on the Independent attribute and in the medium to high range on Modest and Democratic suggesting that these three attributes are important for all senior level leaders in a college that successfully implements CQI. The senior leaders scored in the medium and high ranges on Outgoing and Socially Confident. Just as low levels of these attributes may contribute to the presidents' abilities to share their leadership, the higher levels among the senior leaders may contribute to their ability to accept leadership and decision-making responsibilities.

In the Thinking Domain, the high levels of Behavioral, Change-Oriented, and Conceptual attributes found in the presidents are consistent with principles of continuous quality implementation. Interest in understanding the behaviors and motives of others, in conceptual thinking, and in accepting change are consistent with leading a college through the theoretical and structural changes associated with implementing CQI. Evidence of these attributes was confirmed through the president interviews and through actions taken to implement OPQ on campus. Both presidents have adopted their

theoretical approaches to fit their institutions, and both have considered the motives and behaviors of others, particularly faculty, in developing implementation and training. Both presidents also scored high on the Artistic attribute, but no direct chain was established between this attribute and CQI implementation in this study. A moderate score on Traditional was also common to both presidents, indicating another attribute important to successful implementation of CQI. Particularly in institutions that are already successful and are implementing CQI to improve, the need to recognize the value of traditional methods and thinking is also important. When interviewed, both presidents displayed sensitivity to those who resist change and who are uncomfortable with the unknown. College documents indicated that both had adapted their implementation of CQI to account for these individuals or groups. The presidents had similar scores on innovative. A moderate to high level of innovation is compatible with implementing a system such as CQI. Both presidents adapted and modified TQM tools and processes to fit their colleges. However, both also indicated that they balanced their ideas with those of others, also indicated by their moderate to low scores on Persuasive and Controlling. The presidents also had similar scores in the Thinking Attributes of Practical and Conscientious. There seemed to be no connection between the Practical Attribute and any of the skills or knowledge needed to implement CQI, so it was not included in the theoretical construct. Direct links between the information collected and evidence of the abstract attribute of Conscientious could not be determined.

The senior leaders as a group also scored in the medium to high ranges on the Behavioral, Change-oriented, and Conceptual attributes. As a group their scores were not as high as the presidents' scores, but their scores indicate that the senior leaders in a CQI

institution should also exhibit these attributes. The senior leaders were evenly divided on the Traditional attribute. About one third scored in the high range and one third scored in the low range reinforcing a president's need to be sensitive to issues associated with the traditional thinking attribute.

The presidents did differ on three Thinking domain attributes that are important to an organization committed to the principles and assessments of CQI, and particularly to alignment with the Baldrige Criteria. They are the Data Rational, Forward Planning, and Detail Conscious attributes. President One scored in the low range on all three, and President Two scored in the high range. Rather than conclude that these attributes are not important, an alternate explanation was explored for the low scores of President One. A high score on Data Rational is consistent with the emphasis on use of data in CQI. President One indicated that he has come to have a reluctant respect for data although he gets no particular satisfaction from dealing with it. He has learned the skill of using data, but he monitors its use, preferring that decisions be data influenced rather than data driven. President One is much less likely to be involved in planning or to be involved in the details of a plan than President Two. A continuous improvement organization requires careful assessment and planning processes. President One indicated that over the past 20 years he has empowered others and has delegated many responsibilities. He said that he is much less involved in these activities than he was in the past. The profiles of the 14 senior leaders in College One indicate that 12 have a moderate to high preference for the Data Rational attribute and 10 have a moderate to high preference for the Forward Planning and Detail Conscious attributes. Thus, the president can rely on the interests and abilities of other college leaders in these areas.

These differences indicate that a profile of the leadership team and the situational factors rather than just the president is necessary to understanding the attributes needed for successful implementation of CQI. Presidents like President One, who had worked with the senior leaders for a number of years and who had already developed a team-based, shared management style before beginning implementation of CQI, can rely on senior leaders to contribute in their areas of strength.

In the domain of Feelings and Emotions, attributes important to implementation of CQI include a high level of the Relaxed and Optimistic attributes and a low level of the Worrying and Competitive attributes. Successful implementation of CQI takes 10 to 15 years; in addition, both presidents considered implementation a journey rather than a destination. The process takes patience and persistence. Evidence from both colleges indicated several false starts, the need to adapt and modify plans, and persistence over ten years. Highly competitive individuals prefer to win rather than compromise. In an environment in which everyone is encouraged to participate and to provide leadership and take responsibility, compromise is often necessary. Both institutions have established policy-making and organizational structures that involve shared decision-making and consensus building.

Both presidents scored in the mid-range on Tough-minded and Decisive. Both presidents felt the need to be somewhat tough-minded. Developing CQI processes, asking for outside assessment and evaluation, benchmarking, and getting regular feedback require someone who does not take criticism personally. A team leadership approach often requires more time for decision-making. An individual who always likes to make decisions quickly is not suited to such an environment. Both presidents scored

moderately high on the Critical attribute. Further evidence of their inclination to critically evaluate ideas could not be determined from the information collected, so this attribute is not included in the theoretical construct. The attributes of Emotional Control, Active, and Achieving varied between the presidents. There seemed to be no direct link between the Active attribute and any of the skills or knowledge needed to implement CQI, so it was not included in the theoretical construct. Direct links between the information collected and evidence of the Emotional Control and Achieving attributes could not be determined.

As in the other domains, the senior leaders tended to exhibit scores similar to the presidents, but not matching. Most of the senior leaders scored in the medium to high range on Relaxed, Optimistic, and Critical. The senior leaders tended to score higher on the Worrying and Competitive attributes than the presidents did.

Leadership Styles of Presidents and Senior Leaders

The OPQ also identifies five leadership styles: Directive, Delegative, Participative, Consultative, and Negotiative. Despite the large number of attributes that the presidents have in common, the application of those attributes in leadership situations appears quite different. The leadership styles that the presidents use are more closely related to the situational factors and the senior leaders than they are to the implementation of CQI. For example, President One favors the Participative and Consultative styles and is unlikely to interact using the Directive style. As a Participative leader, he is very concerned to make sure that everyone's views are heard and that the eventual decision is one agreed upon by the group as a whole. As a Consultative leader, he is highly likely to gather opinions from others and to involve others in the decision-making processes. These styles are consistent with the shared leadership that he has developed in his 22 years as president. President Two, on the other hand, has a moderate tendency for all of

the styles. The situational variables in College Two contribute to the president's use of a variety of styles. For example, President Two might use a Participative or Consultative style when interacting with his leadership team but may be more likely to use Negotiative and Directive styles when interacting with unions or within the formal state-mandated structures.

Both presidents scored high on the Adaptability scale, indicating a high capacity to adopt different styles of behavior in different sets of circumstances as needed. For successful implementation of CQI, the president must be able to use a leadership style consistent with the situation.

The senior leaders in both colleges have a tendency to use a variety of leadership styles. As a group they have a moderate tendency to use all of the styles. Like the presidents, they have a tendency to be adaptable, although they are less adaptable than the presidents.

Team Types of Presidents and Senior Leaders

The OPQ also analyzes responses in relation to eight team types. Belbin (1981, 2000) suggested that effective teams include individuals who serve differing roles. Therefore, in addition to describing the team types relevant to developing a CQI institution, the president's team types should also be viewed in concert with other members of their teams.

The role of Shaper is generally inconsistent with the shared leadership concept of CQI. The Shaper tends to take charge and to persuade the team to accept his or her personal objectives. The president of a CQI institution is unlikely to serve as Shaper; neither of the presidents in the case studies was likely to take the role of Shaper. The roles of Innovator/Plant and of Monitor/Evaluator are more consistent with CQI.

Innovators are creative and resourceful and introduce new ideas and approaches. Monitor/evaluators are likely to remain detached and to evaluate and summarize the team's efforts. Both presidents showed a tendency to play these roles. Team Workers are likely to be sensitive and caring and work to keep the team functioning and to minimize interpersonal problems among team members. Both presidents were likely to play this role as well.

The senior leaders in both colleges exhibited a great deal of diversity in the team roles that they are likely to play. This diversity is consistent with well functioning teams. Team leaders who understand the roles and contributions that each team member can make will use this diversity to maximize each member's value to the team.

Intervening Variables

A final area of inquiry in this study addressed intervening variables present in each college that might affect implementation and continuation of CQI in the institution. The intervening variables identified in the literature as important to implementation included presidential commitment and involvement, follower commitment, training, management of change, and reaction to external events that may affect the college.

Analysis of the case study data revealed a number of factors that are important to successful implementation of CQI. The president must provide the vision for implementing CQI and must be the catalyst to start planning and implementation. The president must be strongly committed to the concepts and continue to be directly involved in continuous improvement. The president must provide extensive opportunities for individuals to learn about and practice CQI principles through workshops and training sessions. The president must also be willing to adapt the use of training to fit the situation. Training should be offered as it is needed for specific areas rather than offered

on a rigid schedule. The president must continue to be involved year after year but must also be able to share the responsibility for continuous improvement with all members of the college community. The president should be a role model who practices the principles of CQI. Both presidents in this study were also involved as state and national leaders in quality improvement and use of the Baldrige Criteria, thus demonstrating a commitment beyond their immediate institutions.

Findings Related to Previous Research

The review of literature indicated that leadership studies most often choose leaders for the focus of a study by examining the characteristics of individuals who are generally thought to be great leaders or by selecting from a group of current leaders. This study adds to the literature by selecting effective leaders to study based on the successful achievement of the institution's goals. In addition, many research designs do not account for situational and intervening variables present in the leadership situation (Yukl, 2001). This study was designed to include an investigation of those variables. The study also addressed leadership in the context of change (Elsner, 1984; Kotter, 1990; Senge, 1990; Napier et al., 1998).

This study addressed issues associated with successfully implementing CQI in a community college. Previous studies of implementing Continuous Quality Improvement emphasized the importance of the role of upper management, of the need to empower all employees, and of the importance of managing change (Fallo, 1997; Juran, 1995; Seymour, 1992). Researchers claimed that in addition to total commitment from the CEO (Fallo, 1997), successful implementation requires constant training and the effective use of teams (LeTarte & Schwinn, 1994); they also emphasized that CQI changes the

institution's culture (Babione, 1995; Farmakis, 1995). Leaders must also be prepared to address the difficulties associated with implementation. Implementation is complicated and time consuming (Marchese, 1993); many tenets of CQI are not easily adaptable to educational institutions (Ewell, 1993); and the change associated with implementation has the potential for causing trauma (Hammons, 1994). Failures result from a superficial understanding and commitment and from isolated rather than systemic implementation (Entin, 1994) Implementation takes years, requires extensive training, and results in organizational and cultural changes (Horine & Hailey, 1995).

The results of this study support the literature regarding the institutional conditions necessary to implement CQI successfully. The leaders in this study were themselves involved in the process from the beginning, and they continue to be the primary force for CQI in their institutions. Ten years after they began implementation, they remain committed to a journey of continuous improvement. They also involved other senior leaders early in the process. The leadership teams at both colleges are committed to the process. The presidents and their leadership teams have fully integrated a planning and assessment cycle using the Baldrige Criteria. They have invested time and resources to provide training and on-going support; they have developed a system of teams to implement their goals; and they have remained sensitive to the effects of change on the college's culture, adjusting training and implementation as needed.

Leaders in CQI institutions describe leadership as an art (Thor, 1994a) that requires the leader to balance both the technical and human aspects of the total quality philosophy (Spanbauer, 1994). Researchers call for a leader with vision and integrity who

empowers others, listens, and supports shared decision-making (Leffel et al., 1991; Walters, 1995).

The two presidents and their leadership teams studied exhibit many qualities that are traditionally associated with effective leadership in the community college. See, for example the discussion in Chapter 3 of Vaughan (1986), J. L. Fisher et al. (1988), Roueche et al. (1988), Hammons and Keller (1990), J. L. Fisher and Koch (1996), Campbell and Leverty (1997), Wen (1999), and Hood et al. (1999). The presidents are independent; they are good thinkers who enjoy seeking to understand people's motives and behaviors as well as solving theoretical problems; and they are generally optimistic and relaxed. They are creative, innovative, and change-oriented but are also attentive to the needs of others and are willing to temper the need for change with adjustments that meet the needs of the more traditional.

However, they also possess other less commonly mentioned attributes. They are not personally highly competitive, and they are not particularly outgoing; rather, they are modest. They are not highly persuasive or controlling, preferring to rely on the group to make decisions. They are highly democratic and seek to empower others. They are moderately decisive, but prefer to engage others in decision-making as well. In addition, when interviewed, both indicated that they share their leadership with others throughout their colleges. Therefore, an analysis of the college's leadership also included a study of other college leaders and of team interactions.

This study showed that senior leaders who work for the president often have many of the same attributes as the presidents, although usually to a lesser degree. There is also a high degree of diversity among the group of leaders within a college, particularly

in their leadership styles and team roles. Both presidents indicated a desire for diversity, for a variety of viewpoints and approaches. As President One stated, "the diversity in our group gives us different perspectives and teaches us all to pay attention in different ways." Finally, the senior leaders often possess strengths in areas where the presidents do not.

In contrast to Wen's findings (1999), results of this study indicated that the presidents and senior leaders use a variety of leadership styles and team types and that the presidents were highly adaptable in their use of leadership styles. The study also showed that the presidents had developed empowered teams (Wellins et al, 1991) and that they had committed to a partnership with their senior leaders, to team learning, to sharing information widely, and to solving difficult problems collaboratively as described by Napier et al. (1998).

The results of this study also support contemporary theory regarding needed characteristics of future leaders. These leaders involve followers in their leadership; they value collaboration, diversity, and democratic participation (Rost, 1990; Lorenzo & Zajac, 1996). They are using the principles of CQI to develop learning colleges (O'Banion, 1997).

This study examined the situational variables, the personality attributes, leadership styles, and team types of the presidents and their leadership teams, and the intervening variables in two colleges that have received recognition for their work in implementing CQI and applying the Baldrige Criteria in their colleges. As a research project, its purpose was to contribute to the literature on effective leadership in the new paradigms developing in the 21st century through examination of both leaders and their

leadership situations. For practitioners, this study provides some insight into how a leader's attributes relate to the leadership situation and to senior leaders within an institution.

Limitations

The target population was limited to the member community colleges of the Continuous Quality Improvement Network. The case studies were further limited to the presidents and senior leaders in the two colleges that scored highest on the Self-Assessment survey. The institutional Baldrige Self-Assessment instrument, the Occupational Personality Questionnaire, and the interviews were all self-reporting instruments. Although no conclusions were drawn from any information obtained from only one source in the case studies, the self-report instruments were subject to individual response bias. The results of this case study cannot be generalized to any other population or organizational setting.

The study was further limited by the factor of time. Although conclusions were drawn using multiple sources of evidence and through verification of documents produced throughout the ten-year period, the surveys and interviews occurred only after 10 years or more of CQI implementation. The information they generated cannot be compared to use of the same instruments at the beginning of implementation. It is possible that some of the personality attributes, leadership styles, and team types evolved through the years and were not present at the same levels early in the implementation process.

It was not possible to exclude all other possible explanations for the results. Despite the confirmation from several sources, the theoretical construct was developed on

the basis of two presidents, their senior leaders, and their institutional variables. Additional studies of leaders in successful CQI institutions might lead to further evidence resulting in a modification of the construct.

As with many case studies, the results are based on one observer's conclusions verified by the evidence and respondents. Personal bias is a possible factor. Finally, on site observation of the leaders and their teams was not a part of the research design. Observing daily interaction might have resulted in a modification of the conclusions.

Theoretical Construct

To develop the theoretical construct, the conclusions regarding leadership styles, team types, personality attributes, situational variables, and intervening variables were used. Both quantitative and qualitative inquiry methods were used to determine the leadership and team profiles of the presidents and senior team members of those institutions that scored highest on the Baldrige Quality Award Index Rating. The Occupational Personality Questionnaire (OPQ) was used to determine the critical attributes, team types, and leadership styles of the presidents and their senior team members. Questionnaires and institutional reports and documents were used to gather information about the situational and intervening variables that are associated with successful implementation of CQI. Semi-structured interviews were conducted to further explore the practices of the CEO's and to further understand the organizational structure. Evidence from all sources was sorted and categorized according to the research questions and was presented in the Conclusions section. Multiple sources of evidence were required for a conclusion to be developed into a concept for the theoretical construct.

The first component of the construct concerns the leadership situation. The president should make a long-term commitment, usually 10 to 15 years, and should integrate CQI processes into all parts of the college. Continuous Quality Improvement processes should become a part of the organizational structure of the college. The president should nurture the cultural climate and should encourage broad-based participation. The president needs to gain the commitment of the senior leaders as well as employees throughout the college. The president should be committed to empowering others and should embrace the concept of leadership in which leaders and followers exert mutual influence. Cross-functional teams and horizontal work structures should be developed.

The second component concerns leadership attributes in relationships with people. A CQI environment requires a relations-oriented leadership. Leaders should be Independent, willing to share their views, even if unpopular, and to express opinions even when contrary to a team's view. Leaders should also be Democratic, encouraging others to participate; they should listen to and consult with others. These two attributes in combination contribute to strong team leadership. A somewhat high level of the Modest attribute is also relevant. Leaders should treat everyone equally, de-emphasize status, and share credit for successes. Leaders should not be Controlling; they should seek input from groups rather than take charge and give instructions. Leaders should have a low tendency to be Outgoing. Rather than being extroverted and commanding the center of attention, leaders in this situation should be more reserved and avoid the limelight. Finally, leaders should have a moderate level of the Socially Confident attribute. They should be able to

put people at ease and be comfortable in new situations, but not to such a degree that they become the dominant personality in social groups.

The third component concerns leadership attributes in thinking style. Leaders in this situation should be highly Change-Oriented; they should accept change and seek out new approaches. A moderate to high level of the Innovative attribute contributes to the ability to generate creative ideas and new approaches. These attributes should be combined with a moderate tendency for Traditional. Leaders should have some respect for the status quo and for traditions, particularly as they work to change an environment in which others may be highly traditional in their thinking. Leaders should also have high levels of the Behavioral and Conceptual attributes. They should enjoy analyzing and understanding the behaviors of others, and they should enjoy theoretical thinking. These attributes will help them monitor both the human and technical aspects of the total quality philosophy. All of these attributes are consistent with implementing a new system such as CQI, promoting change, empowering others, and managing a system that is continuously changing.

Another set of thinking styles needed in a CQI institution includes Data Rational, Forward Planning, and Detail Conscious. These abilities are needed for developing and maintaining the planning and assessment cycle necessary for continuous improvement However, as demonstrated in College One, as long as the president has an appreciation for these attributes, he or she can depend on other leaders with these abilities to lead the institution in activities that require these thinking styles.

The fourth component concerns leadership attributes in the feelings and emotions domain. Leaders in successful CQI institutions should be Relaxed and Optimistic and

should have low levels of the Worrying attribute. Leaders should also have a moderate level of the Decisive attribute. They should be able to make decisions even if all the facts are not available, but they should avoid hasty or risky decision-making. Leaders should also be moderately Tough-Minded. They should not be insensitive, but they need to be able to accept criticism and negative feedback in order to sustain continuous improvement. Finally, leaders should display low levels of the Competitive attribute. They should prefer participation and compromise to winning at all costs.

The fifth component concerns Leadership Styles. No one leadership style is specifically suited to a successful CQI institution. Rather, a high degree of Adaptability is required. Leaders should be able to use any of the five styles—Directive, Delegative, Participative, Consultative, or Negotiative—as needed in the situation. Leaders should adapt styles based on the purpose of the group and its relationship to the institution, such as a union bargaining team, an external board, or an internal work team, as well as on the leadership styles of the other team members.

The sixth component concerns how leaders function in Teams. Leaders play varying roles on a team, sometimes depending on the level of preferences for particular roles of others on the team. However, a mature CQI college with well functioning teams is unlikely to need a leader who plays the role of Shaper. Because of their Innovative and Change-Oriented attributes, these leaders are likely to be Innovators on teams, providing creative and resourceful input. However, they should also be concerned with being Team Workers, using their sensitivity and caring attributes to keep the team functioning and to minimize interpersonal problems among team members.

The seventh component concerns intervening variables. The CEO should provide the vision and should be personally committed to the CQI process. The CEO's involvement should continue even after the process has been implemented throughout the college. A successful CQI college also requires the commitment and involvement of all employee groups. The degree of involvement and timing of introducing the principles in various parts of the college can vary, but CQI is a systematic approach so should include all college processes and personnel when fully implemented. Continuous training opportunities and other support systems are also required, although they, too, may be varied according to the institutional structure and depending on the needs of employees. Finally, the leaders should continuously manage the change process and should maintain the disciplined approach of the CQI process even when external events such as budget cuts or external governance changes occur.

These seven components comprise the theoretical construct for leadership in a successful CQI community college.

Implications for Practice

The detailed case studies, the analysis, and the conclusions provide a number of implications for current and future college leaders. For those considering adopting or who are currently involved in CQI, who are interested in learning colleges, working with teams, or undergoing change, the case studies provide a rich source of successful strategies. For example, to implement CQI, practitioners should recognize the time commitment required (10 or more years for complete integration) and the need to involve other leaders and all employees.

The study also suggests the value of knowing one's own attributes, leadership styles, and team types as well as those of others in the college. Forming teams based on the strengths of team members and understanding the levels of adaptability of team members can facilitate team effectiveness.

Finally, practitioners can use the case studies of evidence of the value of evaluating factors such as the organization and culture of their institutions and then adapting strategies to adjust for individual situations.

Recommendations for Further Study

Additional studies of leadership in institutions that have successfully implemented CQI are needed. This theoretical construct was developed from an analysis of case studies of two institutions; further study is needed to develop an integrated theory of leadership. As more institutions enter a second decade of implementation of CQI, there will be greater opportunity to study mature CQI organizations. Three schools won the Baldrige Award in Education in 2001 (BNPQ, 2001). Studies of those and other successful educational institutions will add to the understanding of leaders in the CQI context.

This study suggested some of the relationships between the president and senior leaders in an institution, but it also suggests that additional observation of how leadership teams work and interact with presidents is needed. Of particular interest are the differences in personality attributes and leadership styles, rather than the similarities, and how those differences complement or impede others on the team.

Finally, the two schools in this study exhibited a number of differences in situational variables. In addition, the presidents varied some in the intervention strategies

they used. More study of the interaction of situation, personality attributes, and intervening strategies is needed to understand the nature of the relationship among these factors as they relate to the success of an institution.

APPENDIX A
INSTITUTIONAL SELF-ASSESSMENT

Letter to Participate

September 15, 2000

«Title» «FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«Address2»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

The purpose of this letter is to ask you and your institution to be part of a research study conducted by the Institute of Higher Education at the University of Florida in cooperation with the Continuous Quality Improvement Network. Please have your CQIN Institutional Representative or other administrator most familiar with the Continuous Quality efforts at the institution complete and return the questionnaire in the envelope provided by Friday, October 6, 2000.

Participation in this study will involve responding to an 18-item questionnaire, the Institutional Self-Assessment, that addresses the current CQI efforts at the institution based on the Malcolm Baldrige National Quality Award's 1998 Education Criteria for Performance Excellence. Accompanying the survey is a 12-item Background Information Sheet. Based on the data received, three institutions will be asked to participate further. The second phase of the research involves administering a leadership inventory to the president and senior leadership team members. The inventory determines preferred leadership and team styles. Follow-up interviews with the president and team members will be conducted and additional institutional documents will also be collected.

All data and information gathered in this research project will be kept confidential and will be presented anonymously in support of doctoral research in the important area of leadership and continuous quality improvement. Aggregate data will be available to each institution and to CQIN to assist in your organizational planning.

Also enclosed is an Informed Consent form that is required for all research projects conducted by individuals or groups associated with the University of Florida. Please review and sign the agreement and return it to Barbara Sloan, Institute of Higher Education, University of Florida in the enclosed envelope.

Cordially,

Dale F. Campbell
Professor and Director
Institute of Higher Education

Barbara Sloan
Doctoral Student, UF
Vice President for Academic Affairs
Tallahassee Community College

Self-Assessment Survey Instructions

This self-assessment provides a method of estimating the strengths and weaknesses of your community college's institutional quality efforts based on the seven categories addressed in the Malcolm Baldrige National Quality Award's 1998 Education Criteria for Performance Excellence.

Instructions: Each item describes one of the statements in the Baldrige Criteria. Notes in italics are explanatory statements from the Baldrige Criteria. Please provide responses that reflect the current Continuous Quality Improvement (CQI) efforts at your institution. The Response Sheet provides a five-point scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree. Circle the appropriate response.

Institutional Self-Assessment Instrument

Category 1: Leadership

The Leadership category examines the college's leadership system and senior leaders' personal leadership. It examines how senior leaders and the leadership system address values, a focus on student learning, and performance excellence. Also examined is how the college addresses its societal responsibilities and provides support to key communities.

Leadership System

Note: Senior leader refers to those with main responsibility to manage the college. The leadership system also includes governance entities such as boards.

1.1 Senior leaders involve all key stakeholders in goal setting, communicate and reinforce values and expectations, maintain a climate conducive to learning, and use performance review results and faculty and staff feedback to improve the leadership system.

Public Responsibility and Citizenship

Note: Support of key community might include efforts to strengthen local community services, education, the environment, and practices of professional, trade, and business associations.

1.2 The college addresses current and potential impacts on the public, and college personnel support and strengthen the college's key communities.

Category 2: Strategic Planning

The Strategic Planning category examines how the college sets strategic directions and how it develops key action plans to support the directions. Also examined are how plans are deployed and how performance is tracked.

Strategy Development Process

2.1 The college sets strategic directions to address key student and stakeholder needs and college performance requirements.

College Strategy

2.2 The college has implemented its strategic plan and tracks performance.

Category 3: Student and Stakeholder Focus

The Student and Stakeholder Focus category examines how the college determines requirements, expectations, and preferences of its students and stakeholders. Also examined is how the college builds relationships with students and stakeholders and determines their satisfaction.

Knowledge of Student Needs and Expectations

3.1 The college has a process for determining current and future student needs and for creating an overall climate conducive to learning for all students.

Student and Stakeholder Satisfaction and Relationship Enhancement

3.2 The college has a process for determining and enhancing the satisfaction of its students and stakeholders.

Category 4: Information and Analysis

The Information and Analysis category examines the selection, management, and effectiveness of use of information and data to support key college processes and action plans, and the college's performance management system.

Selection and Use of Information and Data

4.1 The college selects, manages, uses, and deploys information and data to support key college processes and action plans and to improve college performance.

Selection and Use of Comparative Information and Data

Note: Comparative information and data include benchmarking and competitive comparisons. Benchmarking refers to processes and results that represent best practices and performance for similar activities, inside or outside, the academic community. Competitive comparisons refer to performance relative to comparable colleges and/or populations and to competing colleges, as appropriate.

4.2 The college selects, manages, and uses comparative information and data to improve the college's overall performance.

Analysis and Review of College Performance

Note: Analysis includes trends, projections, comparisons, and cause-effect correlations intended to support the setting of priorities for resource use.

4.3 The college analyzes and reviews overall performance to assess progress relative to plans and goals and to identify key opportunities for improvement.

Category 5: Faculty and Staff Focus

The Faculty and Staff Focus category examines how the college enables faculty and staff to develop and utilize their full potential, aligned with the college's objectives. Also examined are the college's efforts to build and maintain an environment and climate conducive to performance excellence, full participation, and personal and organizational growth.

Work Systems

Note: Faculty and staff include permanent, temporary, and part-time personnel. Work design refers to formal and informal departments, teams, and units and their responsibilities, tasks, and authority. Compensation and recognition refer to all rewards, including pay, promotions, bonuses, awards, and other recognition, given to individuals or groups.

5.1 Faculty and staff are involved in achieving the college's performance and student focus objectives through the college's work design and through compensation and recognition approaches.

Faculty and Staff Education, Training, and Development

5.2 The college's education and training systems support the accomplishment of key college action plans and address college needs, including building knowledge, skills, and capabilities, and contributing to improved faculty and staff performance and development.

Faculty and Staff Well-Being and Satisfaction

5.3 The college maintains a work environment and work climate that support the well-being, satisfaction, and motivation of faculty and staff.

Criteria 6: Educational and Support Process Management

The Educational and Support Process Management category examines the key aspects of process management, including learning-focused education design, education delivery, college services, and operations. The category examines how key process are designed, implemented, managed, and improved to achieve better performance.

Education Design and Delivery

6.1 The college effectively designs, implements, manages, and improves educational programs and educational delivery.

Education Support Processes

Note: Education support processes are those which support the college's overall education activities. They include student support services, enrollment management and marketing services, plant and facilities, and secretarial and other administrative services.

6.2 The college effectively designs, implements, manages and improves the college's support processes.

Criteria 7: College Performance Results

The College Performance Results category examines student performance, student and stakeholder satisfaction, faculty and staff results, and college-specific

performance. Also examined are performance levels relative to comparable colleges and/or appropriately selected organizations.

Note: The criteria guidelines suggest results covering three years or more, if available. All data should be considered, even if some is not yet sufficient to demonstrate meaningful trends.

Student Performance Results

7.1 The college's key measures and/or indicators of student performance indicate improvement in student performance and compare favorably to benchmarks with other students or colleges.

Student and Stakeholder Satisfaction Results

7.2 The college's key measures and/or indicators of student and stakeholder satisfaction indicate improvement in satisfaction.

Faculty and Staff Results

7.3 The college's key measures and/or indicators of faculty and staff well-being, satisfaction, and development reflect improvement.

College-Specific Results

7.4 Key college performance results contribute to enhanced learning and/or operational effectiveness, including the capacity to improve.

Institutional Self-Assessment Response Sheet

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Category 1: Leadership					
1.1 Leadership System	1	2	3	4	5
1.2 Public Responsibility and Citizenship	1	2	3	4	5
Category 2: Strategic Planning					
2.1 Strategy Development Process	1	2	3	4	5
2.2 College Strategy	1	2	3	4	5
Category 3: Student and Stakeholder Focus					
3.1 Knowledge of student needs and Expectations	1	2	3	4	5
3.2 Student and stakeholder satisfaction and Relationship enhancement	1	2	3	4	5
Category 4: Information and Analysis					
4.1 Selection and use of information and data	1	2	3	4	5
4.2 Selection and use of comparative information And data	1	2	3	4	5
4.3 Analysis and review of college performance	1	2	3	4	5
Category 5: Faculty and Staff Focus					
5.1 Work Systems	1	2	3	4	5
5.2 Faculty and staff education, training, And development	1	2	3	4	5
5.3 Faculty and staff well-being and Satisfaction	1	2	3	4	5
Category 6: Educational and Support Process Management					
6.1 Education design and delivery	1	2	3	4	5
6.2 Education support process	1	2	3	4	5
Category 7: College Performance Results					
7.1 Student performance results	1	2	3	4	5
7.2 Student and stakeholder satisfaction results	1	2	3	4	5
7.3 Faculty and staff results	1	2	3	4	5
7.4 College-specific results	1	2	3	4	5

Background Information Sheet

1. Name of College _____

2. Name and position of person(s) filling out this questionnaire and the institutional self-assessment survey
   Name: _____

   Position: _____

3. Single or multi-campus. _____

4. If multi-campus, are all campuses involved in CQI? Yes ____ No ____

5. What year did your institution begin implementing CQI? _____

6. What year did your institution join CQIN? _____

7. Please specify the primary reason(s) for implementing CQI? Provide more than one reason, if appropriate.

   a. _____

   b. _____

8. Who first initiated the adoption of CQI?
   Select one or more as appropriate:
   _____CEO _____Academic Administrator _____Business Office Administrator
   _____Department Administrator _____Faculty Member _____Other
   Position title or department association of above: _____

9. What position titles are represented on the CEO's senior leadership team?
   _____ _____ _____

   _____ _____ _____

10. Has the CEO changed at any time since CQI was initiated? If yes, year_____

11. Has there been any change in the persons on the CEO's senior leadership team (those listed in #9) since the implementation of CQI? If yes, please specify.

Position	Year Changed
_____	_____
_____	_____

12. Please provide the following information for each member of the CEO's executive team. Include extra pages as needed.

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Position title: _____
Age: _____
Gender: _____
Predominant Racial Background:
_____ African-American _____ Caucasian
_____ American-Indian _____ Hispanic
_____ Asian-American _____ Other (specify)
Length of employment:
At present community college: _____
In any community college: _____
In other academic institutions or academic organizations: _____
Specify type of institution or organization: _____

Informed Consent Process for Adult Participants Form for Baldrige Survey

I, Barbara Sloan, graduate student in the Department of Educational Leadership, Policy, and Foundations, College of Education, the University of Florida, am conducting research for a dissertation on leadership styles of presidents and senior leaders in institutions involved in Continuous Quality Improvement. If you voluntarily agree to participate, you will be given the Institutional Self-Assessment of Malcolm Baldrige Award Criteria, which estimates the strengths and weaknesses of your community college's institutional quality efforts based on the seven categories addressed in the Malcolm Baldrige National Quality Award's 1998 Education Criteria for Performance Excellence. In addition, you will be given a 12-item questionnaire asking for background information about the institution and key leaders. Together, the instruments will require 30 to 40 minutes to complete.

You do not have to answer any questions, and participants are free to withdraw at any time without penalty. Any information reported will not refer to specific individuals or institutions but will be presented in the aggregate. Confidentiality will be protected to the extent provided by law. You should be aware that no foreseeable risks or benefits are anticipated as a result of your participation in this project. Also, no compensation will be awarded for participation.

I am available to answer any questions concerning the procedures. You can contact me at my work location at Tallahassee Community College, 444 Appleyard Drive, Tallahassee, FL 32304 or by phone (850) 201-8680 or fax (850) 201-8596. If you have questions or concerns about your rights as a participant, you may contact the UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250.

_____ _____

Principal Investigator Date

I have read the procedure described above. I voluntarily agree to participate in the procedure, and I have received a copy of this description.

_____ _____

Participant Date

APPENDIX B
OCCUPATIONAL PERSONALITY QUESTIONNAIRE

Letter to Participate

3551 NW 23rd Place
Gainesville, FL 32605
January 27, 2001

Name
Title
College
Address
Address

Dear :

Thank you for returning the Institutional Self-Assessment based on the Baldrige Award Criteria for Education. Once this research project is completed, individual and aggregate data from the survey will be available to each institution and to CQIN to assist in your organizational planning.

The second phase of the research project focuses on leadership teams. Based on the results of the Baldrige self-assessment, two teams are being asked to participate in this second phase. Your commitment would be as follows:

--Have each member of the leadership team take the Occupational Personality Questionnaire.
--Provide institutional documents regarding your college's organization and planning (much of this is already available from your web site).
--If needed, one or more members of the leadership team would respond to follow up questions in a brief interview.

All data and information gathered in this research project will be kept confidential and will be presented anonymously in support of doctoral research in the area of leadership and continuous quality improvement.

Further explanation follows, but if you would like more information before agreeing to participate, I would like to speak with you or President One by phone to give you more details. College One's participation is of particular importance because, as the literature indicates, implementation of CQI in educational institutions has been difficult for many institutions. Understanding your success can provide valuable information to others. In addition, this study will benefit College One by providing team members with a description of their preferred leadership and team styles.

As indicated in the initial letter, the research involves administering a leadership inventory. The Occupational Personality Questionnaire (OPQ) is a 248-item questionnaire that takes 30-45 minutes to complete. The University of Florida then produces a report describing each person's traits, leadership styles, and team building styles. Each participant will receive an individual report as a result of completing the questionnaire. The data is strictly confidential, but will be collected in a database called the 21st Century Educational Leadership Profiles Project. For more information on the Project, you can visit the following web site:
http://www.coe.ufl.edu/Leadership/Distance/leaders/profile.html.

The following individuals are requested to complete the OPQ.

President
Vice President for Student Learning
Vice President for Student Development
Vice President for Economic Development
Vice President for Institutional Advancement
Vice President for Corporate Services and Workforce Training

Below is a sample of the instructions for each participant. I will send this information in an e-mail to each once I hear from you. Since the questionnaire is administered on line, the e-mail will facilitate reaching the web site and returning the consent forms to me.

Please email me regarding your willingness to continue with this project or to discuss it further. Thank you.

Sincerely,

Barbara Sloan

Sloanb@tcc.cc.fl.us

850-201-8680

On Line Instructions Sample Email

Dear "Participant:"

As a member of College One's leadership team, you are being asked to complete the Occupational Personality Questionnaire (OPQ). This is a 248-item instrument that assesses your preferred leadership and team styles. It is administered on line and takes 30 to 45 minutes to complete.

To satisfy University of Florida research design requirements, please print and sign both of the Informed Consent Forms attached to this e-mail. You may fax them to (352) 392-3664 or mail to this address: Institute of Higher Education, University of Florida, 200 Norman Hall, PO Box 117049, Gainesville, FL 32611-7049. Please mark the envelope to the attention of Barbara Sloan.

To complete the questionnaire, go to the following link in your web browser:
http://opq.shlusa.com/security.asp?ID=695119947

You will be a "new candidate." Although you are asked to give your name, all answers will be kept confidential.

Please respond to the questions based on your preferred style in the workplace. Keep the following points in mind. 1) Be as discerning and honest as you can. Do not give an answer because it seems the right thing to say or because it is how you might like to be. 2) Some of the statements may not appear relevant to you or the choice may be difficult; choose the best or closest answer. 3) Although there is no time limit, you should work as quickly as you can, rather than thinking at length over any one question. 4) In the questionnaire you are asked to rate yourself on a scale from 1 to 5 on a number of phrases or statements. Please try to avoid the middle answer (unsure) as much as possible.

Please complete the survey no later that February 23, 2001.

Informed Consent Process for Adult Participants for OPQ

I, Barbara Sloan, doctoral student in the Department of Educational Leadership, Policy, and Foundations, College of Education, the University of Florida, am conducting research for a dissertation on leadership styles of presidents and senior leaders in institutions involved in Continuous Quality Improvement. If you voluntarily agree to participate, you will be given the Occupational Personality Questionnaire, which assesses leadership style preferences and takes approximately 45 minutes. In addition, participants will be asked to participate in a follow up telephone interview. Topics for the interview will be provided in advance. The interviews will be audio taped; all responses will be kept confidential. I will be the individual who transcribes the tapes. My dissertation advisor and members of my dissertation committee may also have access to the tapes to assist me in following an appropriate protocol for transcribing and classifying the information. Transcribed information will not be identified by individual or by institution; all answers will be kept confidential. Transcribed information will be made available to participants for review and correction. The tapes will be erased upon completion of the dissertation. One person at your institution will also be asked to complete the follow-up questionnaire.

You do not have to answer any questions, and participants are free to withdraw at any time without penalty. Any information reported will not refer to specific individuals or institutions but will be presented in the aggregate. Confidentiality will be protected to the extent provided by law. You should be aware that no foreseeable risks or benefits are anticipated as a result of your participation in this project. Also, no compensation will be awarded for participation.

I am available to answer any questions concerning the procedures. You can contact me at my work location at Tallahassee Community College, 444 Appleyard Drive, Tallahassee, FL 32304 or by phone (850) 201-8680 or fax (850) 201-8682. If you have questions or concerns about your rights as a participant, you may contact the UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250.

_____ _____

Principal Investigator Date

I have read the procedure described above. I voluntarily agree to participate in the procedure, and I have received a copy of this description.

_____ _____

Participant Date

Work Profile Informed Consent Process for Adult Participants

I, Dale Campbell, Professor and Director of the Institute of Higher Education at the University of Florida am conducting research on work profile data on current and aspiring community college presidents, vice presidents/deans. The results will be used to assist us in curriculum development, course revision and advising in our doctoral program in Higher Education Administration. If you voluntarily agree to participate, you will be given the Occupational Personality Questionnaire, which assesses leadership style preferences and takes approximately 45 minutes. You do not have to answer any questions and participants are free to withdraw at any time without penalty. Individual scores will be kept confidential to the extent provided by law through a numerical coding system and only group scores will be published. You should be aware that no foreseeable risks or benefits are anticipated as a result of your participation in this project. Also, no compensation will be awarded for participation. I will be available to answer any questions concerning the procedures or you can contact me at the Institute of Higher Education, University of Florida, 200 Norman Hall, Gainesville, FL 32611 or phone (352) 392-2391 ext. 281 or fax (352) 392-3664. Questions or concerns regarding research participants' rights may be directed to the UFIRB office, PO Box 112250, University of Florida, Gainesville, FL 32611-2250; ph: (352) 392-0433.

I have read the procedure described above. I voluntarily agree to participate in the procedure, and have received a copy of this description for the project titled "Assessing and Developing Educational Leaders" and subtitled "21st Century Educational Leadership Profiles Project."

_____ _____ _____ _____

Participant Date Principal Investigator Date

APPENDIX C
OCCUPATIONAL PERSONALITY QUESTIONNAIRE RESULT SAMPLES

Letter Accompanying Results

3551 NW 23rd Place
Gainesville, FL 32605
Email: sloanb@tcc.cc.fl.us
June 10, 2001

«Title» «FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

Thank you for completing the Occupational Personality Questionnaire (OPQ). Your responses are a valuable addition to the database for the "21st Century Educational Profiles Project" being developed through the Institute of Higher Education at the University of Florida. As indicated in the consent form, individual scores will be kept confidential through a numerical coding system, and only group scores will be published.

Copies of your individual reports are enclosed for your personal use. The OPQ provides an objective assessment of an individual's preferred work style in the areas of relationships with others, thinking styles, and feelings and emotions. The instrument is statistically reliable and valid. In addition, the instrument was designed to minimize an individual's ability to construct a socially desirable profile. However, as with any self-report questionnaire, the results are limited to the individual's perception of self. Therefore, this information should be cross-referenced to past performance, daily behaviors, and other sources of information.

The first report displays your preferences for identified traits in three areas: relationships with people, thinking style, and feelings and emotions. The explanations to the right summarize characteristics of those who score high on that trait.

The second report identifies your leadership/associate styles, used in vertical relationships with boss and subordinates. Four of these attributes are based on the fundamental concept of task versus people interaction; the fifth reflects leadership based on negotiation. These styles are not mutually exclusive and may be adapted to a particular situation. An adaptability scale is also included. The associate styles are the complementary subordinate roles used with those who have authority over you.

The final report is based on Meredith Belbin's description of eight team roles needed for optimum performance. This report describes your likely behavior when working as part of a team. As with leadership styles, team roles may vary depending upon the behaviors of others on a team.

Again, thank you for your participation in this study. Should you have any comments or questions regarding your profile or this study, I will be happy to respond.

Sincerely,

Barbara Sloan

Structure of the OPQ Concept Model

Table C-1
Explanation of OPQ Attributes

Concept Model Attrihute	Low Level of Attribute	High Level of Attribute
RELATIONSHIPS WITH OTHERS		
R1 – Persuasive	Dislikes persuading/negotiating	Can sell and he persuasive
R2 - Controlling	Prefers others to take control	Prefers to direct or take control
R3 - Independent	Accepts instructions, no question	Argues strongly for opinions
R4 - Outgoing	Is quiet and reserved	Is talkative and outgoing
R5 - Affiliative	Prefers to work alone	Likes to work with groups/ teams
R6 - Socially Confident	(no lower level for this attrihute)	Is confident with people
R7 - Modest	Is concerned for status	Avoids talking ahout self
R8 - Democratic	Decides without consultation	Consults others hefore deciding
R9 - Caring	Tends to disregards people issues	Is empathetic and tolerant
THINKING STYLES		
T1 - Practical	Avoids practical activities	Enjoys repairing things
T2 - Data Rational	Judges on hasis of intuition	Judges on basis of data/logic
T3 - Artistic	Not concerned with artistic matters	Shows artistic appreciation
T4 - Behavioral	Avoids analyzing others' hehavior	Likes analyzing others' hehavior
T5 - Traditional	Prefers non-traditional work culture	Follows conventional approach
T6 - Change Oriented	Seeks little change/variety in work	Seeks change/variety in work
T7 - Conceptual	Avoids theoretical approaches	Enjoys working with theory
T8 - Innovative	Sticks to prevalent ideas/solutions	Enjoys creating novel solutions
T9 - Forward Planning	Operates without pre-planning	Enjoys forming short term plans
		Enjoys forming long term plans
T10 - Detail Conscious	Leaves details to others	Is concerned about details
T11 - Conscientious	Leaves routine completion to others	Sees routine tasks through
FEELINGS AND EMOTIONS		
F1 - Relaxed	Worries ahout work prohlems	Can switch off work pressures
F2 - Worried	Stays cool at important events	Gets keyed up for big events
F3 - Tough Minded	Is sensitive to comments about self	Does not suffer hurt feelings
F4 - Emotional Control	Communicates with emotion	Keeps feelings hidden
F5 - Optimistic	Expects the worst to happen	Keeps an optimistic outlook
F6 - Critical	Accepts points without question	Critically evaluates ideas
F7 - Active	Copes easily with inactive johs	Enjoys active johs/activities
F8 - Competitive	Compromises without having to win	Likes to compete and win
F9 - Amhitious	Wants security more than success	Is amhitious for success
F10 - Decisive	Takes time to weigh up decisions	Likes to make quick decisions

Sample Individual Results

Table C-2
OPQ Profile Chart

Scale	SS	1	2	3	4	5	6	7	8	9	10	RELATIONSHIPS WITH PEOPLE
R1	6											Persuasive - Enjoys selling, changes opinions of others, convincing with arguments, negotiates
R2	8											Controlling - Takes charge, directs, manages, organizes, supervises others
R3	8											Independent - Has strong views on things, difficult to manage, speaks up, argues, dislikes structure
R4	6											Outgoing - Fun loving, humorous, sociable, vibrant, talkative, jovial
R5	8											Affiliative - Has many friends, enjoys being in groups, likes companionship, shares things with friends
R6	8											Socially confident - Puts people at ease, knows what to say, good with words
R7	9											Modest - Reserved about achievements, avoids talking about self, accepts others, not status-conscious
R8	6											Democratic - Encourages others to contribute, consults, listens and refers to others
R9	7											Caring - Considerate to others, helps those in need, sympathetic, tolerant

Scale	SS	1	2	3	4	5	6	7	8	9	10	THINKING STYLE
T1	2											Practical - Down to earth, likes repairing and fixing things, enjoys using hands
T2	7											Data Rational - Likes to work with data, operates on facts, enjoys assessing and measuring
T3	6											Artistic - Appreciates culture, sensitive to visual arts and music
T4	7											Behavioral - Analyzes thoughts and behavior, psychologically minded, likes to understand people
T5	5											Traditional - Preserves well proven methods, prefers the orthodox, disciplined, conventional
T6	6											Change oriented - Enjoys doing new things, seeks variety, prefers novelty to routine, accepts changes
T7	6											Conceptual - Theoretical, intellectually curious, enjoys the complex and abstract
T8	7											Innovative - Generates ideas, shows ingenuity, thinks up solutions
T9	8											Forward planning - Prepares well in advance, enjoys target setting, forecasts trends, plans projects
T10	9											Detail conscious - Methodical, keeps things neat and tidy, precise, accurate
T11	10											Conscientious - Sticks to deadlines, completes jobs, perseveres with routine, likes fixed schedules

Scale	SS	1	2	3	4	5	6	7	8	9	10	FEELINGS AND EMOTIONS
F1	7											Relaxed - Calm, relaxed, cool under pressure, free from anxiety, can switch off from work
F2	4											Worrying - Worries when things go wrong, keyed-up before important events, anxious to do well
F3	6											Tough minded - Difficult to hurt or upset, can brush off insults, unaffected by unfair remarks
F4	8											Emotional control - Restrained in showing emotions, keeps feelings to self, avoids outbursts
F5	8											Optimistic - Cheerful, happy, keeps spirits up despite setbacks
F6	7											Critical - Likes probing the facts, sees the disadvantages, challenges assumptions
F7	5											Active - Has energy, moves quickly, keeps busy, doesn't sit still
F8	5											Competitive - Plays to win, determined to beat others, poor loser
F9	4											Achieving - Ambitious, sets sights high, career-centered, results oriented
F10	7											Decisive - Quick at conclusions, weighs things up rapidly, may be hasty, takes risks

Norm: US Managerial & Professional '92-96

Leadership Styles Descriptors

Table C-3
Leadership Styles Chart

Scale	SS	1	2	3	4	5	6	7	8	9	10	LEADERSHIP STYLE
LS1	7	•	•	•	•	•				•	•	Directive Leader
LS2	5	•	•	•				•	•	•	•	Delegative Leader
LS3	5	•	•	•				•	•	•	•	Participative Leader
LS4	5	•	•	•				•	•	•	•	Consultative Leader
LS5	6	•	•	•	•			•	•	•	•	Negotiative Leader
AD1	9	•	•	•	•	•	•	•				Adaptability

Norm: US Managerial & Professional '92-96

STYLE	• DESCRIPTION
DIRECTIVE LEADER	• Maintains responsibility for planning and control. • Issues instructions in line with own perception of priorities.
DELEGATIVE LEADER	• Minimal personal involvement. • Believes in delegation of task and responsibility.
PARTICIPATIVE LEADER	• Favors consensus decision making. • Prepared to take time over decisions. • Ensures involvement of all relevant individuals.
CONSULTATIVE LEADER	• Pays genuine attention to opinions and feelings of associates, but maintains a clear sense of task objectives and makes the final decisions.
NEGOTIATIVE LEADER	• Makes deals with associates. • Influences others by identifying their needs and using these as a basis for negotiation.
ADAPTABILITY	• A measure of the individual's capacity to adopt different styles of behavior in different sets of circumstances.

Associate Styles Descriptors

Table C-4
Associate Styles Chart

Scale	SS	1	2	3	4	5	6	7	8	9	10	ASSOCIATE STYLE
SS1	2											Receptive Associate
SS2	9											Self-Reliant Associate
SS3	9											Collaborating Associate
SS4	10											Informative Associate
SS5	8											Reciprocating Associate

Norm: US Managerial & Professional '92-96

STYLE	• DESCRIPTION
RECEPTIVE ASSOCIATE	• Adheres to instructions and deadlines. • Prefers to work with clear direction from above.
SELF-RELIANT ASSOCIATE	• Prefers to work without constraints. • Has own ideas and enjoys the opportunity to develop them with minimal intervention.
COLLABORATING ASSOCIATE	• Many ideas to contribute. • Enjoys the collaborative decision making process and prefers progressive over conventional methods.
INFORMATIVE ASSOCIATE	• Likes to be involved in decision making, but accepts final decision even if contrary to personally held views.
RECIPROCATING ASSOCIATE	• Not afraid to speak up and undeterred by status. • Responds less well to direction than persuasion. • May be stubborn, but task orientated.

Sample Team Types Results

Table C-5
Team Types Chart

Scale	SS	1	2	3	4	5	6	7	8	9	10	TEAM TYPE
TT1	7	•	•	•	•	•				•	•	Coordinator
TT2	5	•	•	•				•	•	•	•	Shaper
TT3	6	•	•	•	•				•	•	•	Innovator / Plant
TT4	5	•	•	•				•	•	•	•	Monitor-Evaluator
TT5	5	•	•	•				•	•	•	•	Resource Investigator
TT6	7	•	•	•	•	•				•	•	Completer
TT7	8	•	•	•	•	•	•				•	Team worker
TT8	6	•	•	•	•				•	•	•	Implementer

Norm: US Managerial & Professional '92-96

TYPE	• DESCRIPTION
COORDINATOR	• Sets the team goals and defines roles. • Coordinates team efforts and leads by eliciting respect.
SHAPER	• The task leader who brings competitive drive to the team. • Makes things happen but may be thought abrasive.
INNOVATOR / PLANT	• Imaginative, intelligent and the team's source of original ideas. • Concerned with fundamentals.
MONITOR-EVALUATOR	• Offers measured, dispassionate critical analysis. • Keeps team from pursuing misguided objectives.
RESOURCE INVESTIGATOR	• Sales person, diplomat, resource seeker. • Good improviser with many external contacts. • May be easily diverted from task at hand.
COMPLETER	• Worries about problems. Personally checks details. • Intolerant of the casual and careless. Sees projects through.
TEAM WORKER	• Promotes team harmony. Good listener who builds on the ideas of others. • Likeable and unassertive.
IMPLEMENTER	• Turns decisions and strategies into manageable tasks. • Brings logical, methodical pursuit of objectives to the team.

APPENDIX D
INTERVIEW WITH PRESIDENTS

E-mail Request for Presidential Interview

Dear President _____:

I would like to thank you for your support of my dissertation study regarding leadership in institutions with high levels of implementation of Continuous Quality Improvement.

As indicated in the Informed Consent form, the final stage of this study is a brief interview with the presidents (approximately 30 to 45 minutes). I would like to schedule the phone interview with you at your earliest convenience.

If possible, I would like to call your office next week to set up a time for the interview. Would you prefer that I schedule the interview directly with you or through someone else?

I have attached two documents. The first is a copy of the Informed Consent sent to participants last fall. It describes the interview process and guarantee of confidentiality.

The second is a copy of the interview questions. If you prefer to write answers to some or all of the questions prior to the interview, you can email me the responses. If you have any institutional reports or data that provide additional information or details, I would appreciate receiving copies of them.

I will also send you the results of the original survey (based on the Baldrige criteria) for your review before the interview.

Follow Up Interview Questions

Institutions With High Level Of Continuous Quality Improvement

Implementation

1. Briefly describe the reason for implementing CQI at your institution.
2. Who (position title) has had the primary responsibility for implementing CQI? Identify more than one, if appropriate. What has your role been?
3. How did you build support for implementation? Were any areas/groups more resistant than others? What did you do to overcome the resistance?
4. What formal training has been utilized? Please indicate what CQIN activities have been attended as well as who (positions/departments) has attended. Indicate other training resources used (on campus or off campus).
5. How much time has been devoted to training collegewide?
6. What, if any, primary changes have you made to the organizational structure? Why did you make those changes? Were no changes necessary?
7. Briefly describe any changes that have occurred in the institutional climate since implementation of CQI began.
8. Describe any external changes that have occurred since implementation of CQI began. These might include changes in the local or state economy, legislative mandates, or significant changes in state or local governance.
9. You have been provided a copy of your OPQ. Do you want to make any comments about the profile?
10. Do you think your leadership style has changed since your first leadership position? If so, how?
11. Briefly describe your leadership philosophy.
12. Are there changes in your leadership style or leadership goals that you would like to make?
13. What individuals or groups influence your decisions and planning?
14. Briefly describe your functional relationship with your leadership team.
15. How do you think faculty and staff would describe the institutional climate?
16. Briefly describe the role of faculty and staff in institutional decision-making.
17. Is there anything you would like to share regarding leadership in a CQI institution?

President Review of Interview

October 12, 2001

Dear President One,

The attached document contains the data that I have gathered about College One. Sources for the information include documents that I requested from the college, the college's website, the questionnaire and self-assessment survey conducted last fall, your Occupational Personality Questionnaire (OPQ) results, and the interview.

I may not use all of this information in my analysis, nor will it be presented in this order and format. Clearly, it is not carefully edited or polished yet, but the content and meaning should not change. Should any content change, I will send it to you for review again. Before I rearrange it to use to answer my research questions, I would like for you to review it for accuracy and clarification.

I hope that you can respond fairly quickly, but, of course, you can review it according to time available in your schedule. Feel free to make corrections or additions as needed and send it back to me. If you prefer to talk to me about changes or corrections, I will be happy to call you. Let me know a convenient time.

Thank you for agreeing to participate in this study and for the time you have given me.

Sincerely,
Barbara Sloan
Sloanb@tcc.cc.fl.us
Phone: (850) 201-8680

APPENDIX E
INSTITUTIONAL SELF-ASSESSMENT RESULTS

Quality Index Rating Sheet

1. Leadership (110 points)
   - 1.1 (80 points) Score _____ X 1.6 = _____
   - 1.2 (30 points) Score _____ X .6 = _____

2. Strategic Planning (80 points)
   - 2.1 (40 points) Score _____ X .8 = _____
   - 2.2 (40 points) Score _____ X .8 = _____

3. Student and Stakeholder Focus (80 points)
   - 3.1 (40 points) Score _____ X .8 = _____
   - 3.2 (40 points) Score _____ X .8 = _____

4. Information and Analysis (80 points)
   - 4.1 (25 points) Score _____ X .5 = _____
   - 4.2 (15 points) Score _____ X .3 = _____
   - 4.3 (40 points) Score _____ X .8 = _____

5. Faculty and Staff Focus (100 points)
   - 5.1 (40 points) Score _____ X .8 = _____
   - 5.2 (30 points) Score _____ X .6 = _____
   - 5.3 (30 points) Score _____ X .6 = _____

6. Educational and Support Process Management (100 points)
   - 6.1 (60 points) Score _____ X 1.2 = _____
   - 6.2 (40 points) Score _____ X .8 = _____

7. School Performance Reports (450 points)
   - 7.1 (150 points) Score _____ X 3.0 = _____
   - 7.2 (100 points) Score _____ X 2.0 = _____
   - 7.3 (100 points) Score _____ X 2.0 = _____
   - 7.4 (100 points) Score _____ X 2.0 = _____

TOTAL _____

Quality Index	Category	Description
0 – 59.9	I	Not yet quality focused
60 – 69.9	II	Commitment
70 - 79.9	III	Significant Progress
80 – 100	IV	Quality Focused

Rating Results for All Schools Combined

Table E-1
Quality Index Rating Sheet

Composite Weighted Scores			
	Mean	Factor	Wtd. Score
1. Leadership (110 Points)			
1.1 Leadership System (80 Points)	4	1.6	6.4
1.2 Public Responsibility and Citizenship (30 Points)	4.53	0.6	2.718
2. Strategic Planning (80 Points)			
2.1 Strategy Development Process (40 Points)	4	0.8	3.2
2.2 College Strategy (40 Points)	3.6	0.8	2.88
3. Student and Stakeholder Focus (80 Points)			
3.1 Knowledge of Student Needs and Expectations (40 Points)	4	0.8	3.2
3.2 Student and Stakeholder Satisfaction and Relationship Enhancement (40 Points)	4.13	0.8	3.304
4. Information and Analysis (80 Points)			
4.1 Selection and Use of Information and Data (25 Points)	3.8	0.5	1.9
4.2 Selection and Use of Comparative Information and Data (15 Points)	3.2	0.3	0.96
4.3 Analysis and Review of College Performance (40 Points)	3.27	0.8	2.616
5. Faculty and Staff Focus (100 Points)			
5.1 Work Systems (40 Points)	3.73	0.8	2.984
5.2 Faculty and Staff Education, Training and Development (30 Points)	3.6	0.6	2.16
5.3 Faculty and Staff Well-Being and Satisfaction (30 Points)	3.67	0.6	2.202
6. Educational and Support Process Management (100 Points)			
6.1 Education Support Process (60 Points)	3.93	1.2	4.716
6.2 Student Performance Results (40 Points)	3.67	0.8	2.936
7. School Performance Reports (450 Points)			
7.1 Student Performance Results (150 Points)	3.67	3	11.01
7.2 Student and Stakeholder Satisfaction Results (100 Points)	3.67	2	7.34
7.3 Faculty and Staff Results (100 Points)	3.2	2	6.4
7.4 College-Specific Results (100 Points)	3.73	2	7.46
Total (Average of all colleges)			74.386

Overall Frequency of Responses to Institutional Self-Assessment

Table E-2
Total Responses for 15 Colleges

Categories and Statements	N	%	Mean
1.1 Leadership System			4.0
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	0	0	
4 Agree	9	60.0	
5 Strongly agree	4	26.7	
1.2 Public Responsibility and Citizenship			4.53
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	1	6.7	
4 Agree	5	33.3	
5 Strongly agree	9	60.0	
2.1 Strategy Development Process			4.0
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	3	20.0	
4 Agree	9	60.0	
5 Strongly agree	3	20.0	
2.2 College Strategy			3.6
1 Strongly disagree	0	0	
2 Disagree	1	6.7	
3 Neither agree or disagree	5	33.3	
4 Agree	8	53.3	
5 Strongly agree	1	6.7	
3.1 Knowledge of student needs and expectations			4.0
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	0	0	
4 Agree	15	100	
5 Strongly agree	0	0	
3.2 Student and stakeholder satisfaction and relationship enhancement			4.13
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	0	0	
4 Agree	13	86.7	
5 Strongly agree	2	13.3	
4.1 Selection and use of information and data			3.8

1 Strongly disagree	0	0	
2 Disagree	1	6.7	
3 Neither agree or disagree	6	40.0	
4 Agree	7	46.6	
5 Strongly agree	1	6.7	
4.2 Selection and use of comparative information and data			3.2
1 Strongly disagree	0	0	
2 Disagree	3	20.0	
3 Neither agree or disagree	7	46.6	
4 Agree	4	26.7	
5 Strongly agree	1	6.7	
4.3 Analysis and review of college performance			3.27
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	7	46.7	
4 Agree	6	40.0	
5 Strongly agree	0	0	
5.1 Work Systems			3.73
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	1	6.7	
4 Agree	11	73.3	
5 Strongly agree	1	6.7	
5.2 Faculty and staff education, training, and development			3.6
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	3	20.0	
4 Agree	9	60.0	
5 Strongly agree	1	6.7	
5.3 Faculty and staff well-being and satisfaction			3.67
1 Strongly disagree	0	0	
2 Disagree	1	6.7	
3 Neither agree or disagree	4	26.6	
4 Agree	9	60.0	
5 Strongly agree	1	6.7	
6.1 Education design and delivery			3.93
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	3	20.0	
4 Agree	10	66.7	
5 Strongly agree	2	13.3	
6.2 Education support process			3.67
1 Strongly disagree	0	0	

2 Disagree	0	0	
3 Neither agree or disagree	6	40.0	
4 Agree	8	53.3	
5 Strongly agree	1	6.7	
7.1 Student performance results			3.67
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	3	20.0	
4 Agree	8	53.4	
5 Strongly agree	2	13.3	
7.2 Student and stakeholder satisfaction results			3.67
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	5	33.3	
4 Agree	10	66.7	
5 Strongly agree	0	0	
7.3 Faculty and staff results			3.2
1 Strongly disagree	0	0	
2 Disagree	2	13.3	
3 Neither agree or disagree	8	53.4	
4 Agree	5	33.3	
5 Strongly agree	0	0	
7.4 College-specific results			3.73
1 Strongly disagree	0	0	
2 Disagree	0	0	
3 Neither agree or disagree	5	33.3	
4 Agree	9	60.0	
5 Strongly agree	1	6.7	

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BIOGRAPHICAL SKETCH

Barbara Robinson Sloan first attended school in rural Illinois in the 1950s. Her class consisted of one row of three students in a one-room schoolhouse with eight rows and, therefore, eight grades. Her wonderful teacher, Mrs. Schertz, was her first inspiration to become an educator. Barbara moved with her family several times during her middle and high school years. Thus, she was able to experience a variety of environments and teachers. As she moved from the painful beginnings of integration in Louisiana to overcrowded urban classrooms in a midwestern city to a quiet, homogeneous school in the suburbs, her interest in educational systems grew.

Barbara graduated from the University of Missouri in 1970 with a Bachelor of Arts in English. She was hired into a college preparatory teaching position at Meramec Community College in St. Louis and immediately embraced the educational philosophy she learned while working there. The philosophy of low cost, open admissions education was an appropriate culmination to her diverse educational experiences.

Barbara earned her Master of Arts in English at the University of Virginia in 1972 and then taught part time at the University of Kansas while starting a family with her husband, Ken. In 1980, she and Ken and their three children moved to Gainesville, Florida, where she began as a part-time instructor in the college preparatory and English departments at Santa Fe Community College. After a year, she joined the English Department as a full-time faculty member. In 1984, she accepted the position of Chair of

the English Department. In 1996, she was asked to serve as Assistant to the Vice President of Educational Services in addition to continuing her responsibilities as chair.

Barbara began graduate course work in the doctoral program in higher education administration in Fall, 1994 while she continued to work full time at Santa Fe Community College. In 1998, Barbara accepted the position of Assistant Vice President for Instruction at Tallahassee Community College. In 2000, she joined the president's senior leadership team as the Vice President for Academic Affairs at Tallahassee Community College.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Dale F. Campbell, Chair
Professor of Educational Leadership,
Policy, and Foundations

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Richard K. Scher
Professor of Political Science

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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